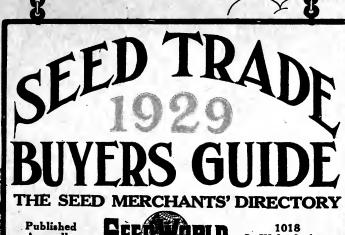
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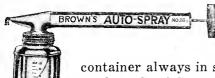
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#### For 1929

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Containing Classified Listings of Seed Growers, Wholesalers,
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Side-Line Merchandise.

Containing Complete Provisions of the Uniform Seed Law, Tables of Seed Exports and Imports, Tariff Rates, Planting and Spraying Tables, Information on Sidelines and Other Data of Interest to the Seed Trade. For Index Refer to Page 5.

It has been the endeavor of the publishers to limit the listings to actual growers, wholesalers or manufacturers who are generally recognized in the trade as being privileged to such classification. For index refer to page 5.

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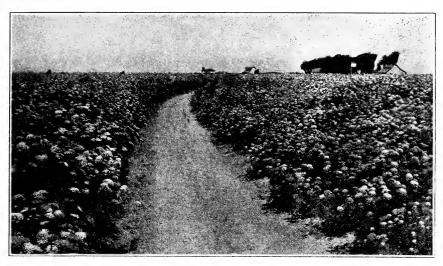
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FLOWER SEEDS

LILY OF THE VALLEY PIPS

#### UNIFORM STATE SEED LAW

(As agreed upon by the Association of Official Seed Analysts, the American Seed Trade Association and the Wholesale Grass Seed Dealers Association in Detroit, June 21, 1917, and as amended in Chicago in 1920 and in Toronto in December, 1921, and in Detroit in June, 1927.)

Title

AN ACT TO REGULATE THE SELLING, OFFERING OR EXPOSING FOR SALE OF AGRICULTURAL SEEDS, AND TO REPEAL ALL LAWS AND PARTS OF LAWS IN CONFLICT WITH THIS ACT.

Title and enactment clause should be worded in accordance with the requirements of

Be it enacted by the Senate and House of Representatives in General Court convened:

SECTION 1. That the term "agricultural seeds" or "agricultural seed," as used in this act, shall be defined as the seeds of Canada Blue Grass, Kentucky Blue Grass, Brome Grass, fescues, millets, tall meadow oat grass, orchard grass, red top, Italian ryegrass, kaffir corn, perennial ryegrass, sorghum, Sudan grass, timothy, alfalfa, alsike clover, crimson clover, red clover, sweet clover, white clover, Canada field peas, cowpeas, soy beans, vetches, and other grasses and forage plants, buckwheat, flax, rape,

barley, field corn, oats, rye, wheat, and other cereals, which are sold, offered or exposed for sale within this state for seeding purposes within this state.

Label Requirements of Agricultural Seeds SECTION 2. Every lot of agricultural seeds, as defined in section one of this act except as herein otherwise provided, when in bulk, packages or other containers, shall have affixed thereto, in a conspicuous place, on the exterior of the container of such agricultural seeds, a plainly written or printed tag or label in the English language,

stating:

(a) Commonly accepted name of such agricultural seeds.

The approximate percentage by weight of purity; meaning, the freedom of such agricultural seeds from inert matter and from other seeds distinguishable by their appearance.

The approximate total percentage by weight of weed seeds; the term "weed seeds," as herein used, being defined as the noxious weed seeds listed in section 2,

subsection (d) and all seeds not listed in section one as agricultural seeds.

The name and approximate number per ounce of each kind of the seeds or bulblets of the following named noxious weeds which are present, singly or collectively, as follows (1) in excess of one seed or bulblet in each five grams of timothy, red top, tall meadow oat grass, orchard grass, crested dogstail, Canada blue grass, Kentucky blue grass, fescues, brome grasses, perennial and Italian rye grass, western rye grass, crimson clover, red clover, white clover, alsike clover, sweet clover, alfalfa and all other grasses and clovers not otherwise classified; (2) one in twenty-five grams of millets, rape, flax, and other seeds not specified in (1) or (3) of this sub-section; (3) one in one hundred grams of wheat, oats, rye, barley, buckwheat, vetches and other seeds as large or larger than wheat.

Noxious weed seeds or bulblets are defined as the seeds or bulblets of \* \* \* (not

more than seven seeds or bulblets should be included here).

The approximate percentage of germination of such agricultural seed together with the month and year said seed was tested, provided, that the state seed commissioner shall test and publish the results of such tests as herein provided, together with the month and year such tests were made by the seed commissioner together with the date of test as shown on label.

(f) Full name and address of the vendor of such agricultural seed.
(Note: List of "agricultural seeds" (Section 1) and "noxious weeds" (Section 2-d) should be in accordance with the conditions in each state.)

Label Requirements of Mixtures of Agricultural Seeds

Section 3. Mixtures of agricultural seeds which contain not more than two kinds of such seeds in excess of five per cent by weight of each, when sold, offered or exposed for sale as mixtures, shall have affixed thereto, in a conspicuous place on the exterior of the container of such mixture of seeds, a plainly written or printed tag or label, in the English language, stating:

That such seed is a mixture.

The name and approximate percentage by weight of each kind of agricultural seed present in such mixture in excess of five (5) per cent by weight of the total mixture.

(c) Approximate percentage by weight of weed seeds as defined in Section 2-c of

this Act.

(d) The name and approximate number per ounce of each kind of the seeds or bulblets of the noxious weeds listed in section 2, subsection (d) of this Act which are present singly or collectively in excess of one seed or bulblet in each fifteen (15)

grams of such mixture.

(e) Approximate percentage of germination of each kind of agricultural seed present in such mixture in excess of five (5) per cent by weight, together with the month and year said seed was tested, provided, that the state seed commissioner shall test and publish the results of such tests as herein provided, together with the month and year such tests were made by the seed commissioner together with the date of test as shown on label.

(f) Full name and address of the vendor of such mixture.

Label Requirements of Special Mixtures

Section 4. Special mixtures of agricultural seeds except as specified in section 3 of this Act, when sold, offered or exposed for sale as mixtures, in bulk, packages or other containers shall have affixed thereto in a conspicuous place on the exterior of the container of such mixture a plainly written or printed tag or label in the English language stating:

(a) That such seed is a mixture.

(b) The name of each kind of agricultural seed which is present in proportion of 5 per cent or more of the total mixture.

(c) The approximate total percentage by weight of weed seeds as defined in

section 2-c of this Act.

(d) Approximate percentage by weight of inert matter.

(e) The name and approximate number per ounce of each kind of seeds or bulblets of noxious weeds listed in section 2, subsection (d) of this Act, which are present, singly or collectively, in excess of one seed or bulblet in each fifteen (15) grams of such mixture.

(f) Full name and address of the vendor of such mixture.

Section 5. Whenever the State Seed Commissioner receives information that agricultural seeds, or any mixture of the same, are being sold, offered for sale, or exposed for sale in this State in violation of any of the requirements of this Act, and is of the opinion that the interests of the public so require, he may present to the court of common pleas of the county in which is located the residence or place of business of the person, firm, or corporation selling, offering for sale, or exposing for sale such seeds, his petition for an injunction to restrain the same, and thereupon the court, being satisfied that such seeds are being so sold, offered for sale, or exposed for sale, shall issue its injunction to restrain such person, firm or corporation from selling, offering for sale, or exposing for sale such seeds.

Exemptions

Section 6. Agricultural seeds or mixtures of same shall be exempt from the provisions of this Act:

(a) When possessed, exposed for sale, or sold for food purposes only;

(b) When sold to merchants to be recleaned before being sold or exposed for sale for seeding purposes.

(c) When in store for the purpose of recleaning or not possessed, sold or offered

for sale for seeding purposes within the State.

Duties and Authority of Enforcing Officer

Section 7. The duty of enforcing this Act and carrying out its provisions and requirements shall be vested in the State Seed Commissioner. The said commissioner upon notice to the seed trade of this State, through the agricultural bulletins of the department of the State Seed Commissioner, shall be empowered to adopt such reasonable "rules and regulations" as may be deemed necessary in order to secure the efficient enforcement of this Act; provided further, that the said commissioner shall maintain a laboratory with necessary equipment and may appoint such analysts, inspectors and assistants as may be necessary for the proper enforcement and carrying out of the provisions of this Act, and in his discretion, fix the salaries of said analysts, inspectors and assistants. It shall be the duty of the State Seed Commissioner in his discretion to publish, or cause to be published, the results of the examination, analysis and test of any sample of agricultural seed or mixture of such seed, drawn as provided for in section 9, together with any information he may deem advisable.

SECTION 8. The word "approximate" as used in this act shall be defined in the rule and regulations provided for in this Act, by the State Seed Commissioner, who shall be guided by the "Rules and Methods of Testing" adopted and approved by the

Association of Official Seed Analysts of North America.

Inspection, Sampling and Testing
Section 9. It shall be the duty of said commissioner, either by himself or his duly authorized agents, to inspect, examine and make analysis of and test any agricultural seeds sold, offered or exposed for sale within this state for seeding purposes within this state, at such time and place, and to such extent as he may determine.

The commissioner, and his agents, shall have free access at all reasonable hours to any premises or structures to make examination of any such agricultural seeds, whether such seeds are upon the premises of the owner or consignee of such seeds or on the premises or in possession of any warehouse, elevator, railway or steamship company and he is hereby given authority in person or by his agents, upon notice to the dealer, his agent or the representative of any warehouse, elevator, railway or steamship company, if present, to take for analysis a composite sample of such agricultural seeds. Said sample shall be thoroughly mixed and two official samples taken therefrom, each official sample shall be securely sealed. One of these official samples shall be furnished to the vendor or party in interest in person, if present, and if not present shall be promptly forwarded to the shipper or owner and the other retained by said commissioner or agent for analysis. In case a sample drawn as provided herein upon test or analysis is found to fall below the statement on the tag or label attached to the lot from which said sample was secured, or to violate any of the provisions of this Act, the vendor or consignee of said lot of seed shall be notified and a copy of said notice mailed to the person, firm or corporation whose tag or label was found affixed thereto. (Payment for samples to be proffered in states where required by State Constitution or state law.)

Violations Defined

Section 10. It shall be unlawful for any person, firm or corporation to sell, offer or expose for sale within this state any agricultural seeds, or mixtures of agricultural seeds, as defined in this Act, for seeding purposes within this state without complying with the requirements of this Act, or falsely to mark or label any agricultural seeds, or to interfere in any way with the inspectors or assistants in the discharge of the duties herein named.

Violations and Prosecutions

Section 11. Every violation of the provisions of this Act shall be deemed a misdemeanor punishable by a fine not exceeding one hundred dollars, and if the State Seed Commissioner shall find upon examination, analysis or test, that any person, firm or corporation has violated any of the provisions of this Act, he or his duly authorized agent or agents may institute proceedings in a court of competent jurisdiction to have such person, firm or corporation convicted therefor, or the State Seed Commissioner, in his discretion, may report the results of such examination to the Attorney General, together with sworn statement of the analyst, duly acknowledged, and such other evidence of said violation as he shall deem necessary. Provided, however, that no prosecution under this Act shall be instituted except in the manner following: when the State Seed Commissioner finds that the act has been violated, he shall give notice to the person or firm in whose hands the seed was found, designating a time and place for a hearing. This hearing shall be private and the person or firm involved shall have the right to introduce evidence either in person, by agent or attorney. If, after said hearing, or without such hearing, in case said person fails or refuses to appear, the said commissioner decides that the evidence warrants prosecution, he shall proceed as herein provided.

It shall be the duty of the Attorney General, or in his discretion he may act through the Attorney of the Commonwealth of the County or City in which said violation has occurred, to institute proceedings at once against the person, or persons, firms

or corporations charged with such violation.

(Note: Proceedings for violation should be instituted according to the laws of each state.)

Provisions for Free Tests

Section 12. Any citizen of this state shall have the privilege of submitting to the State Seed Commissioner samples of agricultural seeds for test and analysis, subject to such rules and regulations as may be adopted by said commissioner. Provided that the Seed Commissioner may by such regulations fix the maximum number of samples that may be tested free of charge and for any one citizen in any one period of time and fix charges for tests of samples submitted in excess of those tested free of charge.

Section 13. Be it further enacted that there is hereby appropriated annually to the State Board of Agriculture for the purpose of enforcing and carrying out the provisions enforcement of the provisions of this Act shall be paid from said sum herein appropriated, by warrant upon the Auditor of Public Accounts, drawn by the State Seed Commissioner and countersigned by the President of the State Board of Agriculture and he shall keep proper vouchers on file in his office for all expenditures.

(Note: Each state should make its provisions for appropriations and expenditures of funds according to local requirements.)

Section 14. Chapter......of the laws of......and any other laws or parts of laws in conflict with this Act, are hereby repealed.

Section 15. This Act shall be effective on and after.....

BUYERS AND SHIPPERS OF

## FIELD SEEDS



The Bowman Seed Co.

Concordia, Kan.

## California Grown Seeds

From the Heart of the Seed Growing District

We Make a Specialty of Growing the Following Varieties Under Contract

**LETTUCE** BEET CARROT **PARSNIP** ONION GARDEN PEAS

**BEANS** LIMA BEANS

Market Gardeners Strains Our Specialty

## F. Lagomarsino & Sons

Seed Growers

CALIFORNIA **SACRAMENTO** 

German, Spanish, Italian Correspondence

#### RED CLOVER SEED PRICES AT TOLEDO

	Lo	w and	High	Cash P	rices p	er Bus	hel for	Prime	Seed b	y Mon	ths	
	Inn	Eeb	Mar	Anr.	Mav	Tune	Tulv	Aug.	Sept.	Oct.	Nov.	Dec.
1917.	.\$10.60	\$10.75	\$10.55	\$10.50	\$10.60	\$10.75	\$10.95	\$11.90	\$12.75	\$13.85	\$15.30	\$15.90
	11.05		11.80	10.95	11.25	11.20	12.00	12.95	13.6 <b>0</b>	15.55	16.30	17.00
1918.	. 16.75	19.40	19.70	18.00	18.00	12.80	13.10	16.30	19.05	22.55	24.00	24.60
1710.	20.00				18.40	14.20	16.35	19.50	23.80	24.00	26.20	26.0 <b>0</b>
1919.		22.30		29.00	25.00	27.00	27.75	29.75	27.90	30.00	29.55	30.30
1/1/.	25.65	25.50			28.00	27.75	29.75	30.50	30.50	21.80	30.60	31.40
1920.		34.60	33.25	25.00	26.00	25.00	19.90	17.65	14.10	12.90	11.20	11.70
1720.	39.95	36.40			27.50	25.65	25.25	21.55	17.90	15.00	13.95	13.25
1921.					13.25	13.00	13.00	11.65	11.40	12.30	11.60	12.55
1741.	13.75	11.95			13.75	13.75	14.00		12.95	13.05	12.70	14.00
1922.		14.00			13.75	13.00	13.00	9.50	10.00	11.05	12.75	13.10
1766.	14.05				13.90	13.00	13.00	11.00		12.70	13.30	13.85
1923.		12.95			11.00		10.00	11.05	12.25	14.15	12.95	12.95
1925.	13.50				11.45	10.85	10.70	12.65		15.20		13.40
1924.		11.35	11.30		10.80	11.00	11.35	11.80		16.50	17.65	19.05
1924.	13.90				11.40	11.65	12.40	13.30		18.20	19.90	
	10.70	12.03	12.00	11.50	11	11.00	12	-0.00			14.30	
1925.	. 19.15	18.10	16.50	16.40	15.00	16.25	16.00	16.25	14.80	16.75	15.50	
1745.	19.13				16.30		17.25	17.45		18.25	*18.50	
	17.00	20.00	10., 0	1,	-0.0						*18.75	
	14.85	14.85	14.25	14.35	14.35	17.50	17.50	17.75	19.25	19.00	,	
	16.00	15.70		14.40	17.50	17.70	17.75	19.50		20.00		
1926	*18.75			*21.00		*21.50	*22.00	†	*21.00	*21.00	21:60	
		*21.00	*21.00	*21.00	*21.00	*22.00		÷	*21.75			
	20.50	21.50						13.75		14.00		
	21.50	23.00	17.65							15.50	16.40	
1927	*23.00	*23.50			*26.50					*15.60		
	*23.50			*27.00							*18.40	
	15.75									13.75		10.70
	16.30							5 14.25		14.25	••••	••••
1928.	*18.05								*17.50			
									*18.20			••••
	1 .10.02	10.03	17.7	, 17.2	, 10.00	, 17.7	J 10.01	0 17.50	10.20	10.05		

<sup>\*</sup>Domestic red clover seed. Other quotations in November and December of 1925 and all of 1926, 1927, and 1928 are on imported seed.

†Stopped quoting cash domestic from July 22 to September 24, 1926.

\*\*Stopped quoting cash domestic May 14, 1927.

#### RANGE OF MARCH CLOVER SEED PRICES AT TOLEDO Low and High Prices per Bushel by Months

	2011	~		Por Buon	C. D. 1110	*** C110		
Crop of	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1918	16.60	19.35	22.30	24.00	24.80	23.45	22.00	24.50
	19.50	23.25	24.00	26.10	26.25	25.85	25.00	30.25
1919	28.60	28.60	29.25	29.65	30.15	<b>31.60</b>	34.20	32.70
	30.50	29.80	31.25	30.50	31.40	35.70	35.42	34.25
1920	18.25	14.65	13.17	11.60	12.10	11.90	10.05	11.05
	21.25	18.60	15.90	14.40	13.35	13.90	12.10	12.95
1921	11.70	11.40	12.30	11.75	12.55	13.20	14.00	14.50
	13.95	13.30	12.95	12.75	13.35	14.25	15.95	16.15
1922	9.05	9.85	11.35	12.85	13.35	13.35	12.70	12.75
	10.30	11.70	12.80	13.50	13.90	13.65	13.50	13.05
1923	11.90	13.15	13.85	13.05	13.05	12.80	11.35	11.50
	13.40	15.20	14.60	13.90	13.60	14.05	13.05	12.35
1924	13.00	13.20	17.00	17.95	19.15	19.35	18.00	16.50
	13.65	18.50	18.5 <b>0</b>	19.95	20.00	20.10	19.85	18.45
1925	14.45	14.45	15.05	14.75	14.65	14.65	14.85	14.25
•	15.35	16.05	16.00	15.50	15.20	16.10	15.75	15.40
1926	17.25	16.90	15.9 <b>5</b>	16.85	17.45	17.70	16.60	16.65
	17.75	19.20	17.25	17.70	18.00	18.50	17.85	17.65
1927		15.85	15.95	17.60	17.80	18.00	16.40	16.65
		16.80	17.75	18.50	18.70	19.00	18.00	17.75
1928	*							

<sup>\*</sup>Stopped quoting March Clover Seed March 31.

## JAS. S. WILSON

PARIS, KY.

# Kentucky Bluegrass Seed Exclusively

Missouri and Kentucky Grown

After forty years' experience we are able to give the best of service. Cleaning and handling facilities unexcelled.

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### HALL SEED COMPANY

INCORPORATED

FIELD SEEDS GARDEN SEEDS ONION SETS

PROMPT SERVICE

PROMPT SERVICE

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LOUISVILLE, KY.

#### CORNELI SEED CO.

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St. Louis, Mo.

#### **BUYERS AND SELLERS**

Alfalfa, Clovers, Timothy, Bluegrass, Red Top, Millets, Sorghum Seed, Sudan, Bermuda, Cow Peas, Soja Beans, Onion Sets, Seed Grain, Seed Corn, Etc.

Ask for Samples and Quotations

#### ALSIKE CLOVER SEED PRICES AT TOLEDO

High and Low Cash Prices per Bushel by Months

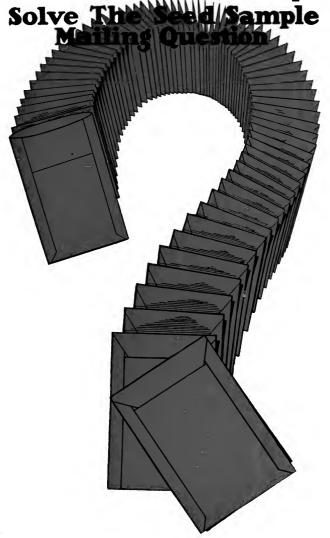
		-	11611 411	u 130 11	Cubii		P		,			
	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19 <b>17</b>	\$11.20	\$11.35							\$12.40		\$14.00	
	11.35	11.80	11.60	11.60	11.50	11.50	12.30	12.35	12.75	14.00	14.50	14.60
1918	14.70	15.25	15.25	15.25	15.00	11.25	11.25	14.50	15.75	18.05	18.55	19.45
	16.60	18.00	15.90	15.50	15.25	14.50	14.50	15.50	18.50	18.50	20.00	19.75
1919	17.30	16.50	16.75	24.00	26.00	19.00	22.25 26.25	24.25	24.30	26.50	29.50	30.05
	19.65	17.50	25.50	26.00	26.00	22.25		25.75	26.50	29.75	31.25	33.00
1920	32.80	34.70	34.85	27.00	22.50	24.50 26.75	21.00 25.00	17.50 21.50	15.25 18.00	16.50 18.50	15.60 18.00	16.25 17.75
	36.25	36.20	36.50	36.25	30.00							
1921	15.50	14.50	13.00	13.50	13.50	13.50	10.10	10.05	10.45	10.50	10.25	10.70
	17.50	15.50	15.00	14.15	13.50	13.50	12.25	11.35	10.75	10.75	10.90	11.40
1922	11.40	12.00	11.50	10.50	10.50	11.50	10.25	9.50	10.00	10.05	10.45	10.65
	12.00	12.65	12.50	11.50	11.50	11.75	11.75	10.25	10.25	11.00	11.50	11.00
1923	10.55	10.45	10.45	10.50	10.00	10.25	10.15	10.15	10.40	10.00	9.25	9.30
	10.95	10.60	10.50	10.50	10.50	10.25	10.25	11.15	10.75	10.50	10.00	9.45
1924	8.70	8.35	8.70	8.75	9.70	9.80	10.65	10.00	10.00	12.15	12.25	12.60
	9.50	8.80	9.20	9.50	10.20	10.80	10.80	10.80	12.25	12.75	13.30	13.25
1925	13.05	12.60	12.75	14.40*				• • • •	• • • •		• • • •	15.60
	13.60	13.60	14.25	15.15								16.25
1926	16.00	16.50	17.00	17.00	17.00	15.00	14.50	14.50		18.00	18.25	19.75
	16.50	17.00	17.00	17.00	17.00	17.00	15.50	16.25	18.75	18.50	19.75	20.85
1927	21.00	22.50	22.75	23.75	24.00			14.60	14.80	14.80	15.40	16.00
	22.50	22.75	23.75	24.00	24.00			17.00	15.25	15.40	16.70	16.80
1928	16.20	15.95	15.00	15.00	15.00	15.00	16.25	16.25	18.75	18.75		
	16.30	16.25	15.95	15.45	15.00	16.25	16.50	18.75	18.75	19.75		• • • • •

<sup>\*</sup>Cash prices not quoted after April 20, 1925.

## EXPORTS OF CLOVER SEED EXPORTS OF TIMOTHY SEED (ALL KINDS)

Years Ending June 30	Years Ending June 30
Year Pounds	Year Pounds
1909	1909
1910 6,977,685	1910
1911 4,359,167	1911
1912 1,874,682	1912
1913 5,407,594	1913
1914 4,640,852	1914
1915 9,750,064	1915
1916	1916
1917 5,886,893	1917
1918	1918 8,564,384
1919	1919
1920 5,061,792	1920
1921 5,419,838	1921
1922 4,007,233	1922
1923 4,331,153	1923
1924	1924
1925	1925
1926	1926 9,942,494
1927 1,992,906	1927
1928	1928

"SPEAR" Envelopes
Solve The Stand Sample
Mailing Question



## JOHN A. HEINRICH, Inc. ENVELOPES

108 North Washington Avenue

**MINNEAPOLIS** 

# THE HUDSONLINE HUDSON LEADERSHIP

Hudson now offers the most comprehensive line of Sprayers in the world. A pattern for every purpose reduces your buying problem to a single source of supply.

From Five Ounces to One Hundred Gallons From Ten Cents to One Hundred Dollars More Than Eighty Different Styles



No. 665-Major

Compressed Air Sprayers

Continuous Sprayers

Quart Atomizers

Pint and Smaller Atomizers

Paint Sprayers

Spray Hose

No. 452—Misty

Dusters

Bucket Pumps

Barrel Pumps

Wheeled Types

Orchard Power Types

Accessories

No. 110-Perfection

HUDSO

Hudson Sprayers and Garden Tools Are Sold the World Over.
They Are Improved and Developed to the Highest
Standard of Quality.

Seedsmen who sell the Hudson line are assured of getting up-to-the-minute merchandise, tested and retested under practical conditions.

#### HUDSON MANUFACTURING CO.

MINNEAPOLIS, MINN.

NEW YORK CITY 147 Chamber St. PHILADELPHIA, PA.
Delaware Ave. and South St.

CHICAGO, ILL. 550 McCormick Bldg.

WRITE FOR 42-PAGE CATALOG

#### PRICES OCTOBER CLOVER SEED AT TOLEDO

#### Low and High Prices per Bushel by Months

Crop of 1	March	April	May	June	July	Aug.	Sept.	Oct.
1915	7.97	8.02	8.25	8.35	7.95	8.50	9.62	12.20
	8.50	8.50	8.50	8.72	8.82	10.30	13.00	13.40
1916	8.47	8.45	8.50	8.72	8.92	8.50	8.90	9.45
	8.77	9.00	8.95	9.22	9.50	11.20	10.05	10.90
1917	9.55	9.85	11.35	11.40	11.50	12.50	13.35	13.85
	9.90	11.80	11.92	11.75	13.00	13.95	13.95	15.55
1918	19.70	18.00	18.00	12.80	13.10	16.30	19.05	22.55
	20.85	20.20	18.40	14.20	16.35	19.50	23.80	24.00
1919	17.00	17.15	19.75	21.50	26.20	29.50	28.15	30.00
	19.30	19.75	22.00	25.50	32.50	32.35	30.60	31.80
1920	23.00	22.00	23.40	23.50	20.15	18.20	14.60	12.90
	25.25	24.25	24.25	26.25	25.95	21.75	18.55	15.60
1921	9.00	8.85	9.50	10.35	11.35	11.65	11.40	12.30
	9.95	9.40	10.50	12.25	14.00	14.05	12.95	13.65
1922	11.00	11.10	11.05	10.80	10.67	8.97	9.70	11.05
	12.35	12.00	11.60	11.35	11.40	10.27	11.50	12.70
1923	11.20	11.45	11.70	11.00	10.90	11.85	13.10	14.30
	11.72	11.95	12.30	11.97	11.55	13.35	15.65	15.60
1924	11.92	11.75	11.85	12.00	12.35	12.50	13.90	17.30
	12.65	12.40	12.40	12.65	13.60	14.30	19.00	19.00
1925	13.00	13.00	13.05	14.50	14.55	14.75	14.75	16.75
	14.00	14.50	14.25	16.10	16.00	16.00	17.25	18.25
1926	15.65	15.65	16.50	19.25	19.65	19.95	20.75	21.00
	16.50	16.70	19.50	20.75	21.25	22.10	22.50	22.75
1927	16.50	16.45	16.00	16.50	16.60	17.00	15.00	15.70
	17.50	17.00	16.85	16.95	17.50	18.00	17.25	17.90
1928	15.00	16.25	17.30	17.75	18.65	17.30	18.00	18.30
	16.15	17.75	17.75	18.75	19.10	18.65	18.60	18.65

#### NUMBER OF PLANTS TO AN ACRE

SET AT REGULAR DISTANCES APART

Distance apart	No. Plants	Distance apart	No. Plants	Distance apart	No. Plants
3 in, by 4 in		3 ft. by 3 ft		5 ft. by 5 ft	_
4 in. by 4 in		3½ ft. by 3½ ft	,	5½ ft. by 5½ ft	•
6 in. by 6 in	174,240	4 ft. by 1 ft	10,890	6 ft. by 6 ft	1,200
1 ft. by 1 ft	43,560	4 ft. by 2 ft	3,630	6½ ft. by 6½ ft	1,031
1½ ft. by 1½ ft	19,360	4 ft. by 4 ft	2,722	7 ft. by 7 ft	888
2 ft. by 1 ft	21,780	4½ ft. by 4½ ft	2,150	8 ft. by 8 ft	680
2 ft. by 2 ft	10,890	5 ft. by 1 ft	8,712	9 ft. by 9 ft	537
2½ ft by 2½ ft	6,960	5 ft. by 2 ft	4,356	10 ft. by 10 ft	435
3 ft. by 1 ft	14,520	5 ft. by 3 ft	3,904	11 ft. by 11 ft	360
3 ft. by 2 ft	7,260	5 ft. by 4 ft	2,178	12 ft. by 12 ft	302

RULE—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and the product will be the number of square feet for each plant or hill; which divided into the number of square feet (43,560), will give the number of plants to the acre.

#### MONTHLY CASH PRICES OF TIMOTHY SEED

The following table exhibits the monthly range of prices, per 100 lbs., for cash Timothy Seed in the Chicago market during the past 21 years:

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1908	4.35	4.60	4.50	4.25	4.10	3.80	3.92	3.60	3.25	3.40	3.75	3.75
	4.55	4.85	4.85	4.65	4.25	4.00	4.10	3.60	3.75	3.75	4.00	3.80
1909	3.80	3.60	<b>3.7</b> 5	3.70	3.80	3.80	3.80	3.55	3.50	3.75	3.75	3.75
	4.00	3.90	3.85	3.80	4.00	3.90	3.80	3.80	4.00	4.00	3.75	3.75
1910	3.75	3.90	3.70	4.40	4.00	4.35	5.00	5.00	8.00	8.50	9.60	9.85
	4.20	4.20	4.60	4.60	4.40	5.00	6.00	7.50	10.00	9.60	9.85	10.00
1911	10.00	10.50	11.25	11.75	12.00	12.00	12.00	13.50	14.50	15.25	16.00	16.00
	10.70	12.50	12.50	12.00	12.00	12.00	13.25	15.00	15.50	16.00	16.25	16.25
1912	16.00	15.00	15.25	13.50	11.50	11.50	6.50	5.00	4.00	4.10	3.80	4.00
.,	16.00	16.25	16.00	15.00	14.50	12.00	12.00	6.25	4.00 5.10	4.10 4.50	3.80 4.15	4.00
1012	4.00	2		2.00								
1913	4.00 4.20	3.50 4.05	3.60 3.85	3.80 3.95	3.95 4.25	4.10 5.40	5.15 5.30	5.25 <b>5.</b> 90	5.30 5.70	5.25 5.5 <b>5</b>	5.30 5.50	5.40 5.55
1014												
1914	5.40 5.55	5.30 5.50	5.00 5 <b>.5</b> 0	5.00 5.40	5.00 5.50	5.00 5. <b>75</b>	5.50 6.75	5.80 6.50	5.50 6.50	5.40 5.60	5.30 5.90	5.90 7.85
1015												
1915	7.75 8.00	7.30 7.75	6.65 7.40	6.90 7.25	6.50 7.25	6.7 <b>5</b> 7.50	6.00 7.50	6.40 10.00	8.00 9.25	<b>7.</b> 75 8.50	8.00 8.50	8.00 9.00
1016												
1916	8.35 8.80	8.40 8.80	8.50 9.00	8.50 8.50	8.50 9.25	8.75 9.25	8.25 8.75	5.25 8.50	5.00 <b>5.2</b> 5	5.00 5.35	5.25 5.75	5.45 5.75
10-5												
1917	5.30 5.75	5.40 5.50	5.75 5.90	6.00 7.75	6.75 8.40	7.25 8.00	7.50 8.50	7.60 8.00	6.50 8.25	6.75 8.25	7.00 8.50	7.00 7.50
1918	7.15 8.00	7.25 7.50	7.00 7.50	7.00 7.75	7.15 7.75	7.00 8.50	8.50 9.00	8.95 10.00	9.85 11.00	10.50 12.00	10.00 12.50	11.00 12.15
1919	11.40 11.75	10.00 11.25	11.00 11.50	10.75 13.50	13.00 14.00	12.60 13.00	12.65 13.25	12.50 12.70	12.00 12.75	12.00 12.75	12.10 12.80	12.00 12.50
1920	13.50 15.50	13.75 15.40	13.00 14.65	12.00 13.50	11.50 12.75	11.50 12.75	12.50 12.75	10.00 11.40	9.50 9.75	5.00 7.25	5.00 6.75	5.50 7.00
1921	5.50 6.75	4.50 6.25	5.00 6.75	6.00 7.65	7.00 7.85	7.00 7.30	6.25 7.50	5.90 6.75	5.50 6.00	5.75 6.75	6.00 7.50	7.00 7.25
1922	7.00 8.00	7.25 7.75	7.00 7. <b>75</b>	7.00 7.25	7.00 7.00	6.00 6.25	5.00 6.25	6.00 6.25	6.00 7.00	6.50 <b>7.</b> 50	7.00 7.50	7.00 7.75
1000												
1923	7.25 7.50	7.25 7.50	7.25 7.50	7.25 7.25	7.00 7.75	7.75 7.75			7.60 8.00	8.00 9.50	8.00 9.00	8.00 9.00
1924	8.50 10.25	8.75 10.25	8.50 10.00	8.75 9.00	8.25 8.75	8.75 8.75	8.75 8.75	6.00 7.50	4.75 6.65	4.75 6.00	4.85 6.35	<b>5.5</b> 0 6.65
1925	5.75 6.40	<b>5.2</b> 5 <b>6.1</b> 5	5.25 5.90	5.25 6.30	5.50 6.40	6.35 7.70	6.85 7.35	6.75 7.75	6.50 7.75	6.7 <b>5</b> 7.75	6. <b>5</b> 0 7.75	6.50 8.00
1926	6.50 8.10	6.40 7.65	6.0 <b>5</b> 7.20	6.00 7.00	6.00 7.00	6.00 7.00	6.00 7.50	5.00 7.50	5.00 6.10	5.00	4.75 5.15	5.00
1027							7.50			5.75	5.15	5.25
1927	4.85 5.75	4.50 5.25	4.50 4.75	4.25 4.75	4.00 4.25	4.00 5.50	4.00 <b>5.</b> 50	3.50 4.75	2.25 3.75	2.25 3.25	3.25 4.50	3.25 4.50
1928	3.25	3.00	3.00	3.00								
	4.25	3.00 4.2 <b>5</b>	3.00 3.75	3.00 4.25	3.30 4.25	3.30 4.45	3.35 4.45	3.35 4.50	3.50 5.60	4.75 6.00		
·				_								

## Kentucky Blue Grass Seed

Grown in the

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Purchasers are assured of choice lots of carefully selected seed, thoroughly cleaned and graded.

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PARIS, KENTUCKY

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Kansas Grown Seed

## ALFALFA, SWEET CLOVER, SUDAN and CANE

Alfalfa Seed Verified as to Origin by U. S. Dept. of Agric.

The Sedgwick Alfalfa Mills

Sedgwick, Kansas

### FORAGE PLANT SEEDS PERMITTED ENTRY UNDER FEDERAL SEED ACT

By Fiscal Years Ending June 30, 1923-1928, and by Countries Exporting (Reported by the U. S. Seed Laboratory, Washington, D. C.)

		A T	FALFA			
	1923	1924	1925	1926	1927	1928
COUNTRY	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Argentina	7,751,600	7,133,200 960,600	1,037,900	221,700	(1)73,700	729 200
Canada	3,600	960,600	1,689,600	4,218,800	5,058,400	728,300
Czecho-Slovakia						
England	*573,600	21,400				
France	116 500	2,905,700	886,200	•••••	(2)1,600	• • • • • • •
Germany	116,500	217,300 113,200	50,200 499,400	• • • • • •	• • • • •	
Italy		1,328,000	508,500			
Siberia		•••••		• • • • •		
Turkey	173,700	• • • • • •	• • • • • •	• • • • •		
Uruguay Other countries	164,500 500	139.000	†110,700	107.800	• • • • • •	54,000
Other countries	300		CLOVER	107,000	•••••	34,000
	1923	1924	1925	1926	1927	1928
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Canada	5,540,900	11,056,000	10,304,500	10,885,500	4,138,800	7,608,600
Czecho-Slovakia England				12,200		
England Germany	2,600		48,800	42,300		
Other countries	22,600		72,000	49,400	24,400	
	1000		PE SEED	1007		****
	1923 Pounds	1924 Pounds	1925 Pounds	1926 Pounds	1927 Pounds	1928 Pounds
China	425,000	1 Junus	Lounus			30,100
England	3,000	1,900	2,500	43,400	9,200	3,700
France	200,900	889,000	234,700	636,000	3,200	
Germany	22,000 1,100,300	65,900 4,918,500	99,500 2,587,300	735,300 3,043,000	149,400	83,700
Holland	4,610,400	127.000	1,381,000	1,406,500	3,582,700 2,998,100	4,616,700 1,703,300
Other countries	22,500	597,900	††39,600	†††662,100	44,900	300
	•	HAIR	Y VETCH			
	1923	_ 1924	_ 1925	1926	1927	1928
Canada	Pounds	Pounds	Pounds	Pounds 70,700	Pounds 48,400	Pounds 6,100
Canada	7,900 101,400	700 600,500	465,600	568,600	32,900	42,900
Denmark	96,900	47,600	71.900	65,000	21,800	52,300
England			32,200	35,200		
Germany	1,048,100 30,800	2,221,200 21,200	1,036,900	1,982,200 7,000	927,900 1,200	1,351,200
Latvia	172,400	11,400	205,600	959,600	787,900	1,256,900
Poland			• • • • •			86,000
Sweden	14,500	18,800	***********	76,300	107,600	43,900
Other countries	127,100	293,500	***256,100 SH RYEGRA	†††221,600	†††196,200	1,055,900
	1923	ENGLIS 1924	1925	1926	1927	1928
-	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Argentina		•••••		2,200	•••••	
Denmark England	11,200	2,400 23,900	49,300	2,200 9 100	57,800	20,000 8,800
Ireland	976,000	1,586,600	824,900	1.823.700	578,500	624,000
Ireland	648,000 193,600		281,600	9,100 1,823,700 210,700	378,600	340,200
Scotland	193,600	182,600	174.100	255,900	187,900	88,800
Other countries	5,300	156,100	5,000 SON CLOVE		• • • • •	1,000
	1923	1924	1925	1926	1927	1928
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Czecho-Slovakia	50,000	416,700	• • • • •			21,500
Denmark	437,200	43,600	4,000	82,800	187,500	19,500
England France	1,614,300	5,218,300	4,339,500	4,955,900	1,438,800	725,600
Germany	62,100	989,600	82,800	76,000	11,000	107,600
Italy				21,600		
Other countries	98,600	**1,076,300	407,700	†629,200	†††747,700	†471,900
	1923	1924	IARD GRAS	1926	1927	1928
_	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Canada	11,200	1,100				169,500
Denmark	733,900	476,300	935,500	249,700	260,300	169,500
Germany	21,900	125,800	54,400 2,000	3,300		3,000
Other countries	1,000	200	2,000	•••••		

<sup>\*</sup>Of Turkestan origin. \*\*376,700 lbs. from Austria and 495,500 lbs. from Hungary. †From Hungary. ††From Poland. ††† From Poland and Hungary. \*\*\*146,400 lbs. from Poland and 109,700 lbs. from Hungary. (1) American goods returned from Argentina. (2) American goods returned from France. (Table continued on opposite page)

## FORAGE PLANT SEEDS PERMITTED ENTRY UNDER FEDERAL SEED ACT

(Continued from preceding page)

	(0)		om preceding	rage		
4		RED	CLOVER			
	1923	1924	1925	_ 1926	1927	1928
COUNTRY	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Argentina	5,100	222 100	151,900	288,000	63,100	3,300
Canada	5,100	333,100 778,700	232,600	85,200	03,100	3,300
Chile	12,200	264,700	45,300	83,200		††43,600
England	44,800	*3,999,000	**281,100	100	109,200	
England	169,800	17,610,300	4.932,600	18,889,600	10,406,500	462,300
Germany	84,000	126,200	4,932,600 432,600	389,900		††††656,700
Germany				11,000		200,000
Italy		999,400	151,100	33,000		
Italy Other countries	132,000	617,500	314,200	28,400	***237,300	****1,402,600
Poland						1,872,300
		CANADA	BLUEGRASS	1		
	1923	1924	1925	1926	1927	1928
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Canada	835,700	816,900	1,149,700	283,000	881,700	1,101,900
	•		ORN MILLET	Г		
	1923	1924	1925	1926	1927	
	Pounds	Pounds	Pounds		Broomcorn	
China		467,500	31,100	1 ounds	millet not	
England	114,100		• • • • • • • • • • • • • • • • • • • •		subject to the	
France					subject to the Federal Seed	
Germany	44,300				Act unless for	
France			22,000	72,700	Act unless for seeding pur- poses from	
Japan Morocco	1,068,900		149,900	383,500	poses from	
Morocco	478,400	110,200			May 26, 1926.	
Siberia	443,800	17,500				
Other countries	100,800		50,000	200		
		SPRI	NG VETCH			
	1923	1924	1925	1926	1927	1928
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Canada	*****	600	1,000	118,000	13,200	• • • • • •
Denmark	17,600		• • • • • •	44.000	22.400	700
England	35,100	460.400	200.000	44,800	22,400	700 187,100
Holland	222 100	460,400 61 <b>6,</b> 200	208,800 945,500	4/9,400	308,100 109,400	63,000
Latvia	315,300	99,000	111,000	479,400 405,400 549,700	356,900	19,800
Scotland	010,000	800	111,000	5,500	6,600	16,800
Other countries	141,800	32,600	• • • • • • • •		175,500	54,800
Poland						220,300
		ITALIA	N RYEGRASS			
	1923	1924	1925	1926	1927	1928
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Argentina	140,100	100,900	137,100	43,100	1001103	2001103
Denmark		77,200	17,600	176,700	230,900	72,000
England	1,600			37,000	1,300	
France			338,400	374,600	76,100	21,800
Holland	284,100	373,300	37,200	2,900 972,800	500	1,900
Ireland New Zealand	284,100	3/3,300	198,400	972,800	372,400	167,400 187,200
Scotland	262,000 28,900	10,100	102,600	2,300	34,400 117,600	5,400
Other countries	142,800	65,700 406,700	102,600	73,800	117,000	200
countries	1.2,000		E CLOVER			200
	1923	1924	1925	1926	1927	1928
Casaba Classalsia	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Czecho-Slovakia Denmark	35,400 55,000	75,000 59,400	197,000 14,200	88,000 5,500	15,300 11,700	24,400
England	72,600	581,800	35,400	114,300	83,900	65,400
France	11,500	34,100	33,400	7,700	03,300	
France	174,300	320,000	661,600	743,100	448,700	629,400
Holland			22,000	44,400		
Italy						
New Zealand	60,800	60,700	4,400		6,800	15,400
Other countries	110,000	276,500	292,700	663,400	408,300	<b>66,</b> 400
Poland	• • • • • • •	• • • • • • •		• • • • • •		<b>977,00</b> 0
	ALL	OTHER F	ORAGE CROP	SEEDS		
	1923	1924	1925	1926	1927	1928
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Canada	51,400	209,400	253,400	264,200	77,000	94,600
China	65,200	100				
Denmark	3,100	100	100	2,200	7,600	100
Germany	200	22,000	100	13,000	• • • • • •	
Other countries	76,800	27,600	5,000	11,200	99,100	200
Other Countries	, 0,000	27,000	3,000	14,200	22,100	200

<sup>\*585,000</sup> lbs. of this was of Chilean origin. \*\*All of Chilean origin except 22,000 lbs. \*\*\*211,700 lbs. of this was from European Russia. ††Of Polish origin. ††††From Poland, Hungary and Roumania. \*\*\*\*Of European Russian origin.

#### Tariff Rates Now in Effect

Approved by Senate and House Conferees, September 12, 1922

#### SEED AND BULB SCHEDULES Title I. (Dutiable List)

#### Agricultural Seeds

Par. 722. Barley \*\*\*\* 20 cts. per bu. of 48 lbs.

Par. 723. Buckwheat \*\* 10 cts. per 100 lbs.

Par. 724. Corn or maize (including cracked corn) 15 cts. per bu. of 56 lbs. \*\*\*

Par. 726. Oats \*\*\* 15 cts. per bu. of 32 lbs.

Par. 727. Paddy or rough rice, 1 ct. per lb. Rye, 15 cts., per bu. of 56 lbs. Par. 728.

Wheat, 42 cts. per bu. of 60 lbs.

Par. 760. Oil-bearing seeds and materials: Castor Beans, ½ ct. per lb.; flaxseed, 40 cts. per bu. of 56 lbs.; poppy seed, 32 cts. per 100 lbs.; sunflower seeds, 2 cts. per lb.; \*\*\*\* soya beans, ½ of 1 ct. per lb.; cotton seed, ¾ of 1 ct. per lb.

Par. 761. Grass seeds: Alfalfa, 4 cts. per lb.; alsike clover, 4 cts. per lb.; crimson clover, 1 ct. per lb.; red clover, 4 cts. per lb.; white clover, 3 cts. per lb.; clover not specially provided for, 2 cts. per lb.; millet, 1 ct. per lb.; timothy, 2 cts. per lb.; hairy vetch, 2 cts. per lb.; spring vetch, 1 ct. per lb.; all other grass seeds not specially provided for, 2 cts. per lb. Provided, that no allowance shall be made for dirt or other impurities in seed provided for in this paragraph.

#### Vegetable, Flower, Other Field Seeds

Vegetable, Flower, Other Field Seeds
Par. 762. Other garden and field seeds:
Beet (except sugar beet), 4 cts. per lb.; cabbage, 10 cts. per lb.; canary, 1 ct. per lb.;
carrot, 4 cts. per lb.; calliflower, 25 cts. per
lb.; celery, 2 cts. per lb.; kale, 6 cts. per lb.;
kohlrabi, 8 cts. per lb.; mangelwurzel, 4 cts.
per lb.; mushroom spawn, 1 ct. per lb.; onion,
15 cts. per lb.; persley, 2 cts. per lb.; radish,
4 cts. per lb.; pepper, 15 cts. per lb.; radish,
4 cts. per lb.; pinach, 1 ct. per lb.; tree and
shrub, 8 cts. per lb.; turnip, 4 cts. per lb.;
rutabaga, 4 cts. per lb.; flower, 6 cts. per lb.;
all other garden and field seeds not specially
provided for, 6 cts. per lb. Provided, that
the provisions for seeds in this schedule shall
include such seeds whether used for planting include such seeds whether used for planting

Par. 763. Beans \*\*\*\* dried, 1¾ cts. per lb.
Par. 765. Lentils, ½ of 1 ct. per lb.; lupines, ½ of 1 ct. per lb.
Par. 767. Peas \*\*\*\* dried, 1 ct. per lb.

#### Rates on Bulbs

Par. 751. Tulip, lily and narcissus bulbs and lily of the valley pips, \$2 per thousand; hyacinth bulbs, \$4 per thousand; erocus bulbs, \$1 per thousand; all other bulbs and roots, root stocks, clumps, corms, tubers and herbaceous perennials, imported for horiticultural purposes, 30 per centum ad valorem; cut flowers, fresh or preserved, 40 per centum ad valorem.

#### Title II. (Free List)

Par. 1626. Oil-bearing seeds and nuts: Copra, hempseed, palm nuts, palmnut kernels, tung nuts, rapeseed, perilla and sesame seeds; seeds and nuts not specially provided for, when the oils derived therefrom are free of duty.

In the opinion of the American Seed Trade Association counsel, Curtis Nye Smith, Esq., seedsmen should declare hemp-seed and all varieties of rapeseed under this Par. 1627, free of duty, and not under Pars. 761 or 762 of the Dutiable List (Title I). Par. 1657. Seeds: Chickpeas or garbanzos, cowpeas and sugar beets.

Sec. 304 (a). \*\*\*\* Every package containing any imported article, or articles, shall be marked, stamped, branded, or labeled in legible English words, so as to indicate clearly the country of origin.

Sec. 315. The President, under certain conditions, may until July 1, 1924, change classifications, increase or decrease duties.

#### COMPARISON WITH PREVIOUS RATES

Following are some of the important field and vegetable seeds showing a comparison between present import duties and those pre-viously in force under the 1913 Tariff Act. In each case the first number indicates the present duty and the second the duty just prior to the passage of the 1922 Tariff Act. Figures represent duty per pound in cents.

#### Field Seeds

Alfalfa, 4, free; alsike clover, 4, free; crimson clover, 1, free; red clover, 4, free; white clover, 3, free; clover n. s. p. f., 2, free; millet,

1, free; timothy, 2, free; hairy vetch, 2, free; spring vetch, 1, free; all other grass seed, 2, free; sugar beet, free, free; rape, free, free.

#### Vegetable Seeds

Beet (except sugar), 4, 3; cabbage, 10, 6; canary, 1, ½; cauliflower, 25, free; celery, 2, free; kale, 6, 6; kohlrabi, 8, 6; mangelwurzel, 4, free; mushroom spawn, 1, 1; omion, 15;

parsley, 2, 3; parsnip, 4, 3; pepper, 15, 10; radish, 4, 3; spinach, 1, 1; turnip, 4, 3; rutabaga, 4, 3; flower, 6, free; all other vegetable and field seed not specially provided for, 6, 5

#### Oil-Bearing Seeds

Castor beans, ½, 3/10;\* flaxseed, 40, 20;\*\* poppy, 32, 32; sunflower, 2, free; soya beans, ½, free; cotton, ½, free; rape, free, free;

hempseed, free, free; sesame, free; peanuts (shelled), 4, 3/4; peanuts (unshelled), 3, 3/8.

<sup>\*</sup>Per bushel; \*\*per 100 pounds.

## Wholesale Field Seeds

Buyers

THE PROPERTY OF THE PROPERTY O

Clover Alfalfa Alsike and Timothy

Sellers

AUGUNDUR HURAUN HURAUN AUGUN A

# Henry Hirsch & Sons

**TOLEDO** 

OHIO



## COMPANY

Growers of

#### SEED PEAS SEED BEANS SEED POTATOES

Our seed stocks are grown under the best climatic conditions for the development of strong healthy plants. We maintain growing centers in irrigated as well as non-irrigated sections. All of our seed stock selections are under the personal supervision of members of our firm.

### "OUR SEEDS GROW FRIENDS"

Growing Contract Prices Now Ready for 1929 Crop.

A small surplus of Seed Peas for spot shipment.

### Washburn-Wilson Seed Co.

Moscow, Idaho

to Engraphic lock and the lock of

#### WHAT THE SEED VERIFICATION SERVICE MEANS

(Prepared by the Bureau of Agricultural Economics)



THE U.S. SEED Verification Service, or simply the Seed Verification Service, inaugurated in October, 1927, by the Bureau of Agricultural Economics of the U.S. Department of Agriculture, gives the buyer of alfalfa seed bearing a verified-origin seed certificate, issued under authority of the department, the proper assurance that such seed was produced where stated in the certificate.

All dealers enrolled in this Service, known as verified-origin alfalfa seed dealers, agree to obtain, so far as possible, proper assurances of origin of all lots of alfalfa purchased by them and to request verification of origin for all such lots. They also agree to keep prescribed stock records and samples, which, together with their stocks, are subject to the inspection of seed inspectors of this Bureau. Furthermore, these dealers are required to make applications for inspection certificates covering all lots which are to be verified, to submit weekly reports covering new lots of verified-origin prepared or offered for sale, and to comply with the rules and regulations of the Service. Forty-six dealers in 19 States, extending from New York to California and from Minnesota to Texas, have been enrolled for this season (ending June 30, 1929).

This Service is concerned only with origin of alfalfa seed; that is, locality of production, and not with variety, purity, germination, quality, grade, etc. In connection with the service no statements, expressed or implied, are to be made that the verified-origin seed certificate carries with it any verification other than that regarding the origin or locality of production and the identification of a particular lot.

The origin of every lot of seed covered by a verified-origin seed certificate may, through an examination by a Federal seed inspector of the records and samples of the verified-origin dealer offering such seed, be traced back to the place where the seed was produced. Furthermore, these records will show what disposition is made of every pound of alfalfa seed handled by a verified-origin dealer, including non-verified as well as verifiedorigin lots.

Although verification this season is to be limited to alfalfa seed, the plan of the Service lends itself to verification of all kinds of seed—field, vegetable and flower. In fact, last season clovers and seed corn, as well as alfalfa were included in this Service and may be reinstated in the future if sufficient interest is manifested in the verification of origin of these seeds.

The Seed Verification Service is purely a voluntary one and there are no penalties other than the withdrawal of the privileges accorded dealers enrolled in it. Each verified-origin seed dealer understands, however, that if improper, unethical, deceptive, fraudulent, illegal, or unauthorized use is made in his advertising or otherwise of an inspection certificate or of a verified-origin seed certificate or of the service itself, he may be denied further benefits or use of this Service and that the privilege or authority to issue verified-origin seed certificates may be withdrawn

The starting point in the evidence supporting the statement of origin is the grower's or shipper's declaration or an official state certificate of origin. The shipper in filling in a shipper's declaration declares that the lots described therein have been obtained directly from growers with proper declaration or other sufficient evidence as to locality of production, that the facts stated therein are correct to the best of his knowledge and belief, and that the locality of production and identity of each lot are properly covered in his records, which will be made accessible for verification by a Federal seed inspector at any time upon request.

With declarations at hand covering the various lots of seed for which verification is desired, the verified-origin dealer makes application to the nearest inspector for an inspection certificate, giving the kind of seed, name of shipper and shipping point, or declaration number covering the shipment, date of shipment, shipper's lot number or mark, the verified-origin dealer's receiving lot number, the quantity in pounds, place where the seed was grown, and kind of assurance of origin (declaration or verified-origin seed certificate of another verified-origin dealer) covering the shipment. This certificate is

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in effect a transcript of the dealer's own record which may be examined at any time by a seed inspector. It entitles the verified-origin dealer to issue verifiedorigin seed certificates for all lots covered by it.

The verified-origin seed certificate is the recognized commercial document verifying the origin and identity of the seed which it covers. This certificate seed which it covers. may be used in either of two forms; namely, as a tag certificate attached to a bag or other container, or as an invoice certificate mailed with shipping documents. The tag certificate gives, in addition to the name and address of the verified-origin seed dealer, the kind of seed, lot number, and where the seed was grown. It is attached securely to every bag in shipments made to purchasers who are not verified-origin seed dealers. The invoice form of verified-origin seed certificates will be used mainly in transactions between verified-origin dealers.

An emblem in the form of a shield with the words "Verified-Origin Seed" superimposed upon the letters "U S" and used in connection with the word "alfalfa" has been adopted for use by verified-origin dealers in letterheads, tags, circulars, catalogs, newspaper advertising, etc. This emblem will serve to identify these dealers from others who are not enrolled in the Seed Verification Service.

This service is conducted by virtue of the authority vested in the Secretary of Agriculture by the appropriation act for that department, to establish an inspection service for perishable products. This act, among other things, provides for fees that are reasonable and that cover as nearly as possible the cost of the Service. Accordingly, for seed listed in an inspection certificate a fee of 2 cents per 100 pounds is charged. The fee for a particular lot is payable by each of the verified-origin dealers handling it.

Applications for enrollment in the Service for each year ending June 30,

will be considered between July 1-Sepapplication for 1929 (i. e., season of 1929-30) will be considered July 1-September 1, 1929. Because of the difficulty in supervising a service in which would be enrolled many country shippers or dealers at more or less inaccessible points who handle small quantities of alfalfa seed for which the expense of supervision would frequently be as great as, if not greater than, that incurred in inspecting records of large handlers of this seed, enrollment in this service has been considered primarily for dealers doing an interstate business and handling large quantities of alfalfa seed grown in various states. Firms in producing districts who confine their purchases of this seed largedistricts and firms in consuming districts who do almost entirely a local business, probably would not find it particularly advantageous to enroll in the Seed Verification Service. Many of these firms, however, will derive benefit indirectly from the service by selling to or buying from verified-origin seed dealers.

The Seed Verification Service is in part a voluntary agreement entered into between the department and qualified dealwho agree to comply with its provisions, rules and regulations in return for the privilege of issuing verified-origin seed certificates and of enjoying the benefits to be derived therefrom. success of the service is dependent to a considerable extent upon the whole-hearted cooperation of these dealers. The department shares with them the responsibility for making a verified-origin seed certificate in effect a guarantee that the origin of the seed is as stated. The service is being supervised closely so that every one can feel confident that its provisions are being complied with fully. Inspectors for this Service are located at Washington, D. C.; Chicago, Minneapolis, Kansas City, Salt Lake City, and

San Francisco.

## READ SEED WORLD

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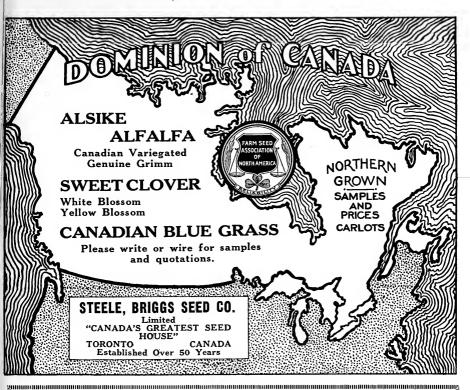
Morris, Illinois

#### LOCATION OF SEED LABORATORIES

Many seedsmen use state and Government seed laboratories for the testing of their various lots of seeds, both for purity and germination. The following table lists the various state and Government seed laboratories in United States and Canada.

allous state and dovern	inclife seed laboratories	in Chitch States and Canada.
STATE	CITY	LOCATION
ALABAMA	ontgomery	Department of Agriculture
ARIZONA		Agricultural Experiment Station
ARKANSAS		Agricultural Experiment Station
CALIFORNIA	•	State Department of Agriculture
COLORADO		Agricultural Experiment Station
CONNECTICUT		Agricultural Experiment Station
DELAWARE		State Board of Agriculture
IDAHO	Boise	5
INDIANA	Lafayette	Agricultural Experiment Station
ILLINOIS		Department of Agriculture
IOWA		Agricultural Experiment Station
KANSAS		Agricultural Experiment Station
KENTUCKY		Agricultural Experiment Station
LOUISIANA		State Board of Agriculture
MAINE		Agricultural Experiment Station
MARYLAND	College Park	Agricultural Experiment Station
MASSACHUSETTS.		Agricultural Experiment Station
MICHIGAN	Lansing	State Department of Agriculture
MINNESOTA	St. Paul	. University Farm, Agri. Exp. Station
MISSISSIPPI		Agricultural Experiment Station
MISSOURI	Columbia	Agricultural Experiment Station
MONTANA		Agricultural Experiment Station
NEBRASKA		Department of Agriculture
NEW JERSEY		Agricultural Experiment Station
NEW HAMPSHIRE.		Agricultural Experiment Station
NEW MEXICO	State College	Agricultural Experiment Station
NEW YORK	Geneva	. Agricultural Experiment Station
NORTH CAROLINA NORTH DAKOTA	Kaleigh Callage	Department of Agriculture Agricultural Experiment Station
OHIO	Columbus	Department of Agriculture
OKLAHOMA	Oklahoma City	. Board of Agriculture
OREGON	Corvallis	Agricultural Experiment Station
PENNSYLVANIA .	Harrisburg	Department of Agriculture
RHODE ISLAND SOUTH CAROLINA.	Columbia	Agricultural Experiment Station . Department of Agriculture
SOUTH DAKOTA	Brookings	Agricultural Experiment Station
TENNESSEE	Nashville	State Department of Agriculture
TEXAS	Austin	State Department of Agriculture
UTAH VERMONT	Burlington	State Crops and Pests Commission Agricultural Experiment Station
VIRGINIA	Richmond	Department of Agriculture
WASHINGTON	Olympia	. Department of Agriculture
WASHINGTON,D.C.*	• • • • • • • • • • • • • • • • • • • •	Bureau of Plant Industry, U. S. De
WEST VIRGINIA	Charleston	partment of Agriculture . Exp. Station, Dept. of Agriculture
WISCONSIN	Madison	. Department of Agriculture
WYOMING	Laramie	Agricultural Experiment Station
CANADA	Calgary	Seed Branch, Dept. of Agriculture
CANADA	Ottawa	Seed Branch, Dept. of Agriculture Seed Branch, Dept. of Agriculture
CANADA	Winnipeg	Seed Branch, Dept. of Agriculture
CANADA	Toronto	. Seed Branch, Dept. of Agriculture . Seed Branch, Dept. of Agriculture

<sup>\*</sup>States not having laws regulating the sale of seeds. All other states have laws regulating the sale of seeds. Copies of the laws may be obtained by communicating with the various departments as indicated above.





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Seed Commr. Idaho

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IDAHO GRIMM ALFALFA SEED GROWERS ASSOCIATION
BLACKFOOT, IDAHO

## ADDRESSES OF STATE AGRICULTURAL COLLEGES AND EXPERIMENT STATIONS

ALABAMA-Auburn, Ala. ARIZONA-Tucson, Ariz. ARKANSAS—Fayetteville, Ark. CALIFORNIA—Berkeley, Calif. COLORADO-Fort Collins, Colo. CONNECTICUT-New Haven, Conn. DELAWARE-Newark, Dela. FLORIDA-Gainesville, Fla. GEORGIA-Athens, Ga. IDAHO—Moscow, Ida. ILLINOIS-Urbana, Ill. INDIANA-Lafayette, Ind. IOWA—Ames, Ia. KANSAS-Manhattan, Kans. KENTUCKY, Lexington, Ky. LOUISIANA—Baton Rouge, La. MAINE-Orono, Me. MARYLAND-College Park, Md. MASSACHUSETTS, Amherst, Mass. MICHIGAN, East Lansing, Mich. MINNESOTA — University Farm, St. Paul, Minn. MISSISSIPPI—A. and M. College, Miss. MISSOURI—Columbia, Mo.

MONTANA-Bozeman, Mont.

NEBRASKA-Lincoln, Nebr. NEVADA-Reno, Nev. NEW HAMPSHIRE-Durham, N. H. NEW JERSEY-New Brunswick, N. J. NEW MEXICO-State College, N. M. NEW YORK-Ithaca, N. Y. NORTH CAROLINA - State College Station, Raleigh, N. C. NORTH DAKOTA—Fargo, N. D. OHIO-Wooster, Ohio. OKLAHOMA—Stillwater, Okla. OREGON-Corvallis, Ore. PENNSYLVANIA-State College, Pa. RHODE ISLAND-Kingston, R. I. SOUTH CAROLINA—Clemson College, S. C. SOUTH DAKOTA—Brookings, S. D. TENNESSEE-Knoxville, Tenn. TEXAS-College Station, Tex. UTAH-Logan, Utah. VERMONT-Burlington, Vt. VIRGINIA-Blacksburg, Va. WASHINGTON-Pullman, Wash. WEST VIRGINIA—Morgantown, W. Va. WISCONSIN, Madison, Wis. WYOMING-Laramie, Wyo.

## FIELD SEED PRODUCTION IN UNITED STATES FOR PAST FIVE YEARS

(Subject to Revision)

(Compiled by Hay, Feed & Seed Division, Bureau of Agricultural Economics, U. S. Department of Agriculture)

Kind	Lbs. or Bu.	1923	1924	1925	1927	1928**
Alfalfa		54,500,000	60,000,000	57,000,000	47,500,000	28,000,000
Clover, alsike	Lbs.	16,800,000	16,500,000	17,000,000	22,500,000	13,500,000
Clover, red	Lbs.	38,000,000	44,000,000	40,000,000	75,000,000	56,000,000
Clover, white	Lbs.	800,000	1,300,000	1,500,000	1,700,000	1,200,000
Clover, crimson	Lbs.	300,000	300,000	175,000	300,000	350,000
Bluegrass, Ky	Bus.	<i>775</i> ,000	535,000	2,000,000	1,800,000	325,000
Meadow Fescue*	Lbs.	2,100,000	1,750,000	1,300,000	2,500,000	1,300,000
Orchard Grass	Bus.	160,000	130,000	400,000	195,000	225,000
Redtop*	Lbs.	10.500,000	6,000,000	8,300,000	18,000,000	14,250,000
Sudan Grass		24,000,000	28,000,000	25,000,000	37,000,000	33,000,000
Timothy		90,000,000	80,000,000	87,000,000	96,000,000	55,000,000

<sup>\*</sup>Recleaned seed.

<sup>\*\*</sup>Preliminary figures subject to revision.

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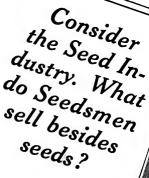
HAMILTON, CANADA

## WEIGHT AND MEASURE EQUIVALENTS

- 1 Milligram (mg.) = 0.1 centigram = 0.015,432 grain = 0.001 gram.
- 1 Centigram (cg.) = 10 milligrams = 0.154,324 grain = 0.01 gram.
- 1 Decigram (dg.) = 1.543,24 grains = 0.1 gram.
- 1 Gram (g.) = 1,000 milligrams = 100 centigrams = 15.432,356 grains = 0.035,274 ounce (Avd.) = 0.032,150 ounce (Troy) = 0.002,204 pound (Avd.) = 0.001 kilogram.
- 1 Kilogram or Kilo (kg.) = 15,432.356,39 grains = 1,000 grams = 35.2740 ounces (Avd.) = 32.150,7 ounces (Troy) = 2.204,62 pounds (Avd.).
- 1 Grain (gr.) (same in Avoirdupois, Troy or Apothecary weights) = 64.798 milligrams = 6.479 centigrams = 0.064,798 gram = 0.002,285 ounce (Avd.).
- 1 Ounce (oz.) (Avd.) = 2,834.95 centigrams = 437.500 grains = 28.349,5 grams = 16 drams (Avd.) = 0.911,458 ounce (Troy) = 0.062,500 pounds (Avd.) = 0.028,349 kilogram.
- 1 Pound (lb.) (Avd.) = 7,000 grains = 453.592,427 grams = 256 drams (Avd.) = 16 ounces (Avd.) = 14.583,3 ounces (Troy) = 0.453,592 kilogram.
- 1 carat (diamond) = 200 milligrams. 1 carat (diamond) = 4 pearl grains.
- 1 pennyweight (dwt.) (Troy) = 24 grains = 1.555,17 grams = ½0 ounce (Troy or Apoth.). 1 gram = 0.643,015 pennyweight.
- 1 scruple (Apoth.) = 20 grains = 1.295,978 grams =  $\frac{1}{3}$  dram (Apoth.) =  $\frac{1}{24}$  ounce Troy or Apoth.). 1 gram = 0.771,618 scruple.
- 1 dram (Avd.) =  $27^{11}/_{32}$  or 27.343,75 grains = 1.771,85 grams = 0.455,729 drams (Apoth.) =  $\frac{1}{16}$  ounce (Avd.). 1 gram = 0.564,383 dram (Avd.).
- 1 dram (Apoth.) = 60 grains = 3.887,934 grams = 3 scruples = 2.194,29 drams (Avd.) =  $\frac{1}{8}$  ounce (Apoth.). 1 gram = 0.257,206 dram (Apoth.).
- 1 ounce (oz.) (Troy) = 480 grains = 31.103,5 grams = 20 pennyweights = 1.097,14 ounces (Avd.) = 1 ounce (Apoth.) =  $\frac{1}{12}$  or 0.083,333 pound (Troy or Apoth.) = 0.068,571 pound (Avd.). 1 gram = 0.032,150 ounce (Troy). 1 ounce (Avd.) = 0.911,458 ounce (Troy). 1 pound (Avd.) = 14.583,3 ounces (Troy). 1 kilogram = 32.150,7 ounces (Troy).
- 1 ounce (Apoth.) = 480 grains = 31.103.5 grams = 24 scruples = 8 drams (Apoth.) = 1.097.14 ounces (Avd.) = 1 ounce (Troy) =  $\frac{1}{12}$  or 0.083,333 pound (Apoth. or Troy) = 0.068.571 pound (Avd.).
- 1 gram = 0.032,150,7 ounce (Apoth.). 1 ounce (Avd.) = 0.911,458 ounce (Apoth.).
  1 pound (Avd.) = 14.583,3 ounces (Apoth.). 1 kilogram = 32.150,7 ounces (Apoth.).
- 1 meter = 39.370,00 inches 1 inch = 25.400,05 millimeters 1 foot = 304.801 millimeters
- 1 meter = 3.280,83 feet 1 inch = 2.540,005 centimeters 1 foot = 30.480,1 centimeters
- 1 meter = 1.093,61 yards 1 inch = .025,400,05 meters 1 foot = .304,801 meter

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# CHARACTERISTICS OF FIELD SEEDS

VARIETY	Viability of Good Seed	Purity of Good Seed	Average Germination One Year Old	Average Length of Vitality Years	Weight of Seed Per Bu. Legal	Weight of Seed Per Bu. Actual	Quantity Required Per Acre	Yield of Seed Per Acre	Number of Seeds Per Pound Average
Alfalfa	66-26	66-86	94	8-9	09	60-63	15-20	300-700	220,000
Bluegrass, Kentucky	70-85	75-85	30-40	1-2	14	14-28	20.30	200-350	2,400,000
Bluegrass, Canada	85	75-85	30-40	1-2	14	14-24	15	200-500	2,400,000
Brome Grass	90-95	66-86	85-90	5	14	12-20	10-14	250-350	137,000
Clover, Alsike	66	66	7.5	2	09	99-09	8-12	100.300	700,000
Clover, Red	66	66	90	5-6	09	60-63	8-12	100-300	250,000
Clover, White	66	86	75	2	09	60-63	8-12	200-300	700,000
Clover, Crimson	66	66	06	2	09	60-63	12-20	200-300	125,000
Clover, Sweet	95-98	66	90-95	5			20-30	150-400	235,000
Cowpea	06	66	80	2	09	Variable	30-60	900-1800	1,800-5,100
Fescue, Meadow	96	06	93	2		20-30	10-15	200-300	250,000
Millet, Foxtail (Common, Golden, Hungarian, Siberian)	06	86	88	4	48-50	40-55	25-50		200,000
Orchard Grass	86	62	06	2-3	14	12-22	12-20	140-168	400,000
Rape	95	66	06	9			2-4	600-1000	
Redtop	95	95-98		9	14	12-40	10-20		4,135,900
Rye Grass, Perennial	95	86	80	2		10-30	25-35	250-500	336,000
Rye Grass, Italian	95	86	80	2	20	12-24	35-40	200	285,000
Soy Bean	86	66	06	2	09	09	20-30	1000-2400	2144-6388
Timothy	86	86	95	2-6	45	42-50	9-15	225-450	1,170,500
Vetch	95	66	06	3	09	09	40-90	600-720	8,500-16,000

# RUSSIAN AND UKRAINIAN SUGAR BEET SEEDS

(Kleinwanzleben Type)

Exceptionally high sugar yields per acre. Absolutely guaranteed as to purity, germination and freedom from all foreign seeds. All seeds grown and packed under supervision of

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Seeds now on hand in New York City. Samples furnished for field trials and experimental purposes. Correspondence for NEW CONTRACTS SOLICITED. Send for bulletins.

We also represent several other seed breeding organizations in Soviet Union, and are ready to submit samples and prices on the following seeds:

Ukrainian Red Clover
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Vetches
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Selected Seed Grains
Vegetable and Fruit Tree Seeds

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165 Broadway

New York City

# COMMODITIES FOR WHICH BUSHEL WEIGHTS HAVE BEEN ESTABLISHED IN MORE THAN FOUR STATES

	Common	ılv		
	Accepta Weight	eđ		
Kind	Bu.—L			
Alfalfa				
Barley				a California. a Louisiana.
Beans, Castor	46	5 50		i Iowa, Maryland, Nebraska and South Dakota. Florida.
Beans, Lima	56	5		
Beans, Soy Bluegrass Bran	14 20	)	lbs. i	North Carolina and Virginia.
Broomcorn		42 48 30 57 44	lbs. is lbs. is lbs. is lbs. is	Alabama, South Carolina and Tennessee. Arkansas, Illinois, Oklahoma and Texas. Kansas and North Dakota. Minnesota and West Virginia. North Carolina.
Buckwheat	48	52	lbs. i	<ul> <li>Alabama, Idaho, Minnesota, Nebraska, Nevada, North Carolina, Ohio, South Carolina, Tennessee and Wisconsin.</li> <li>Arkansas, Georgia, Illinois, Missouri, Montana, New Mexico, Oklahoma and Texas.</li> <li>California.</li> </ul>
Canary Seed .	60	5 <del>6</del> 42	ilbs. i	n Kentucky. n North Dakota.
Clover Seed Corn, Cracked	60			
Corn, in Ear. Corn, Pop, in	70	68	3 lbs. i	o Ohio and West Virginia.
Corn, Pop, in	Ear. 70	42	lbs. i	o Ohio.
Corn, Shelled Corn, Sweet .				n California. n Minnesota and North Dakota.
		45	i lbs. i	n Ohio.
Cornmeal		48	lbs. 1	n Arkansas, Florida, Idaho, Illinois, Iowa, Maryland, Mississippi, Nebraska, Nevada, Ohio, Virginia and West Virginia.  Georgia, North Carolina, South Carolina and Virginia.
Cottonseed	32	33	3 lbs. i 3 lbs. i	in Arkansas.  Missouri.
Emmer	40	28 0 48 45	lbs. i lbs. i lbs. i	n Tennessee. n Nebraska. n Wyoming.
Flaxseed Hempseed		50		n Minnesota and North Dakota. n Nevada.
Herdsgrass			) the i	n North Carolina and Texas.
Kafir Corn Kale		2 10	) lbs. i	n North Carolina. a South Carolina. a Tennessee.
Millet	50	48	B lbs. i	Minnesota.
Millet, Jap Oats				
Orchard Grass Peanuts	14	2 25 2 20 2 2	) lbs. i 1 lbs. i	n Georgia. n Illinois, Maine, New Hampshire, South Dakota and Vermont. n Kentucky and Mississippi. n South Carolina and West Virginia.
Peas	60		6 the i	n West Virginia.
Potatoes, Irisl Potatoes, Swee	et 50	0 55 54	5 lbs. i 4 lbs. i	n Alabama, Georgia, Kentucky, Minnesota and Oklahoma. n Connecticut, Maine, Mississippi, New Hampshire, New York, Pennsylvania, Rhode Island, South Dakota, Vermont and Wisconsin.
D C .		50	o IDS. 1	n Florida, Michigan, Missouri, North Carolina and Virginia.
Rape Seed Red Top Rice (unhulled	14	<b>4</b> 5 44		Maine, North Carolina and South Carolina.
Rye				n Georgia. n California,
Sorghum		0 57 50	7 lbs. i 6 lbs. i	n Minnesota, North Dakota and West Virginia. n Florida. n Mississippi and Missouri.
Speltz	40	0 48	8 lb <b>s.</b> i	n Nebraska.
Timothy Wheat	4!	<b>5</b> 60	o lbs. i	n Wyoming. n Arkansas.

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SACRAMENTO, CALIFORNIA Growers of

# SELECTED STRAINS OF ALL CALIFORNIA VEGETABLE SEEDS

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MOBILE ALABAMA

# DIRECTORY SECTION

(See Index on pages 5 and 6.)

On the following pages are given the names and addresses of seed growers, whole-salers of both field and garden seeds. For manufacturers of store and warehouse sup-plies, and merchandise for resale purposes, etc., see pages 128 and 164.

By this method of classification it is easy to locate the growers or wholesalers in any particular state or section of the country and the manufacturer or distributor of anything used by the seed dealer in the conduct of his own business or sold to his patrons.

Every effort has been made, in compiling this directory, to make it as complete as possible. The names and the lines handled were supplied by the firms listed in response to a general invitation to the trade.

The publication of this book has been made possible by the support and co-operation of the firms listed in black face type and whose advertising appears on the pages as indicated by the numbers following their names.

## WHOLESALE FIELD SEEDS

ALABAMA

Buchanan Feed & Seed Co., Anniston, Ala.
Poyner Seed Co.
Dothan, Ala. Florence Seed & Feed Co. Florence, Ala. North Alabama Seed Co. Florence, Ala. Wind & Co., I. Wind & Co., L.
Huntsville, Ala.
Van Antwerp Seed Store
Mobile, Ala.

(See Adv. Index Page 178) Hawthorne-Jones Co., Inc. Montgomery, Ala. Callen, Geo. M. Selma, Ala.

ARIZONA

Capital Fuel & Feed Co. Phoenix, Ariz. Liefgreen Seed Co. Liefgreen Seed Co.
Phoenix, Ariz.
Quick Seed & Feed Co.
Phoenix, Ariz.
Alfalfa Seed Co.
Yuma, Ariz.
Pawley, A.
Yuma, Ariz.
Sanguinetti, E. F.
Yuma, Ariz.
Turner. Leo. Turner, Leo Yuma, Ariz.

ARKANSAS

Fort Smith Seed Co., Inc. Fort Smith, Ark. Lee, Arthur G. Fort Smith, Ark.

CALIFORNIA 1 CALIFORNIA

Aggeler & Musser Seed Co. Los Angeles, Cal. (See Adv. Index Page 178) Germain Seed & Plant Co. Los Angeles, Cal.
(See Adv. Index Page 178)
Bomberger Seed Co.
Modesto, Cal.

Ward Seed Co., Wm. A.
Sacramento, Cal.
(See Adv. Index Page 178) Sevin-Vincent Seed Co. San Francisco, Cal. Volkmann & Co., C. M. San Francisco, Cal.

CANADA McKenzie Co., Ltd., A. E. Brandon, Man., Canada Hunter & Co., A. S. Durham, Ont., Canada Bruce & Co., Ltd., John A.

Hamilton, Ont., Canada
(See Adv. Index Page 178)
McDonald & Sons, Ltd., Kenneth
Ottawa, Ont., Canada
Canada Seed Co., Ltd., The
Toronto, Ont., Canada
Goodall, Ltd., James
Toronto, Canada Toronto, Canada Hogg & Lytle, Ltd. Toronto, Ont., Canada Keith & Sons, Geo. Toronto, Canada

Morrow Seed Co., Ltd.
Toronto, Ont., Canada
(See Adv. Index Page 178)
Rennie Co., Wm., Ltd.
Toronto, Canada

Steele, Briggs Seed Co., Ltd. Toronto, Canada (See Adv. Index Page 178)

Webb & Sons, Ltd., Edward Toronto, Canada (See Adv. Index Page 178)

COLORADO

Barteldes Seed Co. Denver, Colo.
Western Seed Co.
Denver, Colo.
Grand Junction Seed Co.

Grand Junction, Colo.
(See Adv. Index Page 178) Strain Bros.

Lamar, Colo. James, R. H. Rocky Ford, Colo.

# Want Information?

Write the SEED WORLD Free Service Bureau. It was established for this very purpose.

SEED WORLD, 1018 So. Wabash Ave., Chicago

### WHOLESALE FIELD SEEDS-Continued

Cadwell & Jones Hartford, Conn.
Chamberlain & Son
Hartford, Conn.
Platt Co., Inc., The Frank S.
New Haven, Conn. Comstock, Ferre & Co. Wethersfield, Conn. (See Adv. Index Page 178)

DIST. OF COLUMBIA

Bolgiano & Co., F. W. Washington, D. C.

CONNECTICUT

GEORGIA

Planters Seed Co. Americus, Ga. Americus, Ga. Cofer & Co., H. L. Athens, Ga. The Rowland Co.

Athens, Ga. Snelson Seed Co. Athens, Ga.

Everett Seed Co.
Atlanta, Ga.
Heard, Geo. (Cowpeas)
Atlanta, Ga.

Walton & Co.
Augusta, Ga.
Rhodes Seed Co. (Cowpeas)
Forsythe, Ga.
Settle & Robison (Cowpeas)

Jackson, Ga. Arrington, H. H.—Pearl Millet Rome, Ga.

Curry-Arrington Co. Rome, Ga.

IDAHO

Idaho Grimm Alfalfa Seed Growers Assn.

Idaho Grimm Alfalfa Seed Grower
Blackfoot, Idaho
(See Adv. Index Page 178)
Central Coal & Seed Co.
Boise, Idaho
Union Seed & Fuel Co.
Boise, Idaho
Buhl Seed & Grain Co.
Buhl, Idaho
Pioneer Seed & Grain Co.
Burley, Idaho
Caldwell Produce Co.
Caldwell, Idaho
Lilly Seed Co.

Lilly Seed Co. Caldwell, Idaho Jerome Milling & Elevator Co.

Jerome, Haho
Means, Mark
Lewiston, Idaho
Vollmer Clearwater Co.
Lewiston, Idaho
Washburn-Wilson Seed Co.

Moscow, Idaho
(See Adv. Index Page 178)
Darrow Bros. Seed & Supply Co.
Twin Falls, Idaho
Wendel Milling & Elev. Co.

Wendel, Idaho

ILLINOIS

Funk Bros. Seed Co. Bloomington, Ill Vollbracht Co., Wm. Camp Point, Ill.

American Field Seed Company

American Field Seed Company
Chicago, Ill.
Dickinson Co., Albert
Chicago, Ill.
Hales & Hunter Co.
Chicago, Ill.
Kellogg Seed Co., John L.
Chicago, Ill.
(See Adv. Index Page 178)
Johnson, Inc., J. Oliver

(See Adv. Index Page 178)
Johnson, Inc., J. Oliver
Chicago, Ill.
Maulding & Co., C. A.—(Redtop)
Dahlgren, Ill.
Schultz, J. M.
Dieterich, Ill.
Keith & Son, L. J.—(Redtop)
Fairfield, Ill.
Poorman & Co., A. J.
Fairfield, Ill.
Egyptian Seed Growers Exchange—
(Redtop) (Redtop)

(Redtop)
Flora, Ill.
Noble Bros.
Gibson City, Ill.
Morris Grain & Seed Co.
Morris, Ill.

Olney Seed & Feed Store
Olney. III.
Shultz Seed Co.

Olney, Ill. Kelly Seed Co.

Peoria, Ill.
Keller & Sons, Geo.
Quincy, Ill.
Quincy Seed Co.

Quincy, Ill. Condon Bros.

Rockford, Ill. (See Adv. Index Page 178) Wayne City Seed Co.—(Redtop and Sun-

flower) Wayne City, Ill.

INDIANA

INDIANA
Studebaker Grain & Seed Co.
Bluffton, Ind.
Crabbs, Reynolds, Taylor Co.
Crawfordsville, Ind.
Crawfordsville Seed Co.
Crawfordsville, Ind.
Seberger Seed Co.
Crown Point, Ind.
Heldt Co., The
Evansville, Ind.
McCarty Co., The J. A

McCarty Co., The J. A. Evansville, Ind. Ohio Valley Seed Co. Evansville, Ind.

Purcell Seed Co. Evansville, Ind.

Kraus & Apfelbaum Fort Wayne, Ind.

Wolf Seed Co.
Fort Wayne, Ind.
Hooton-Davis Seed Co.
Lebanon, Ind.

Scott Seed Co. New Albany, Ind.

Meyer Grain Co. South Whitley, Ind. Goodrich Bros. Co. Winchester, Ind.

# Our Advertisers Made This Book Possible USE THE STICKER!

(Page 179)

and you will convince them that it was worth the effort.

# At last, in response to the demands of the entire agricultural world!



A 1,500-acre pineapple plantation in Hawaii completely covered with Mulch Paper. More than 4,000 miles were laid in Hawaii in 1927.

# GATOR-HIDE MULCH PAPER

Is Now Available in Unlimited Quantitie

IN the spring of 1928, International Paper Company announced, through its advertising in a large list of farm and garden publications, the acquisition of the Eckart Patents covering the manufacture and sale of Mulch Paper in the 37 states east of Colorado.

At that time, with but limited production facilities, it was decided to restrict the sale of the paper to four rolls to the individual notwithstanding the fact that even then certain planters were waiting to

The result of the restricted sales policy, however, was that thousands instead of a merchandful of planters were able to experiment with the paper and see for themselves just what miracles it works in stimulating plant growth.

Now Ready for Sales in Any Quantity

Today, however, with production established, we are able to

# GATOR-HIDE

The MIRACLE PAPER. THAT PRODUCES

offer Gator-Hide Mulch Paper in unlimited quantities, and distributorships are being established throughout the country.

Extensive Advertising in 1929

The Gator-Hide Mulch Paper Advertising Campaign for 1929 embraces a representative group of farm and garden publications and includes extensive sales promotion work through County Fairs, Motion Picture Films, etc. It is a campaign so broad in its scope that, coupled with the existing demand for Mulch Paper, it is certain to produce a profitable business for everyone engaged in handling Gator-Hide.

# Write for Dealer Proposition

If you are interested, write us at once for full particulars. The opening gun in the 1929 advertising campaign will be fired one month before 1929 dawns—in the December issues of the farm magazines.

Gator-Hide Mulch Paper should be listed in all catalogues. Write for electros or mats.

INTERNATIONAL PAPER CO.

Dept. S2, Mulch Paper Division
Pershing Square Building
Park Ave. and 42nd St., New York City

What Gator-Hide Mulch Paper Is

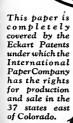
GATOR-HIDE MULCH PAPER is an extremely tough Kraft Paper impregnated by a special process with asphalt. Its manufacture and sale by International Paper Company are completely covered by the Eckart Patents.

The paper, in use, is laid directly over the prepared plant beds and planting is accomplished either through holes made in the paper or between successive rows of the paper.

The value of Mulch Paper lies in the fact that it increases the temperature of the soil, retards evaporation of moisture by the sun, and practically eliminates all weeding.

\$500,000 is invested in Paper Mulch annually in Hawaii for pineapple cultivation, and the resulting increase in yield has been estimated at 30%. In this country increases on crop yields have varied from 73% to

more than 600%.



# MULCH PAPER

BIGGER, BETTER AND EARLIER CROPS

### WHOLESALE FIELD SEEDS-Continued

IOWA Haley-Neeley Co. Carroll, Iowa (See Adv. Index Page 178) (See Adv. Index Page 178)

Hamilton Seed & Coal Co.
Cedar Rapids, Iowa
(See Adv. Index Page 178)

Council Bluffs Seed Co.—Seed Corn
Council Bluffs, Iowa
Ouren Seed Co.
Council Bluffs, Iowa
(See Adv. Index Page 178)

Younkerman Seed Co.
Council Bluffs, Iowa
Davenport Seed Co.
Davenport, Ia.

Davenport, Ia. (See Adv. Index Page 178) Standard Seed Co.

Des Moines, Iowa
Todd & Kraft Co.

Des Moines, Iowa Nishna Valley Seed Co. (Seed Corn) Shenandoah, Iowa
(See Adv. Index Page 178)
Bruns Seed & Grain House

Sigurney, Iowa
Sigurney, Iowa
Haley-Necley Co.
Sioux City, Iowa
(See Adv. Index Page 178)
Sloux City Seed Co.
Sioux City Iowa (See Adv. Index Page 178)
Wertz Seed Co.

Sioux City, Ia. (See Adv. Index Page 178)

KANSAS Mangelsdorf Seed Co.

Atchison, Kan. Bowman Seed Co. Concordia, Kan (See Adv. Index Page 178)

Barteldes Seed Co. Lawrence, Kan. Salina Produce Co.

Salina, Kan.

Salina, Kan.

(See Adv. Index Page 178)
Sedgwick Alfalfa Mills
Sedgwick, Kan.
(See Adv. Index Page 178)
Coe Seed & Grain Co., D. 0.
Topeka, Kan.

(See Adv. Index Page 178) Ross Bros. Seed Co. Wichita, Kan.

KENTUCKY

RENTUCKY

Brent Seed Co., The C. S.

Lexington, Ky.

Lexington, Ky.

Chambers Seed Co.

Louisville, Ky.

Hall Seed Co.

Louisville, Ky.

Hall Seed Co.

Louisville, Ky.

Hardin, Hamilton & Lewman

Louisville, Ky. Lewis Implement & Seed Co. Louisville, Ky. Louisville Seed Co.

Louisville, Ky. National Seed Co.

Louisville, Ky.

Ross Seed Co.

Ross Seed Co.
Louisville, Ky.
Watts & Son, John R.
Louisville, Ky.
Wood, Stubbs & Co.
Louisville, Ky.
Brent & Co., Inc.

Brent & Co., Inc. Paris, Ky. Spears & Sons, Woodford Paris, Ky. (See Adv. Index Page 178)

Spears-Kiser Co.

Paris, Ky. (See Adv. Index Page 178) son, Jas. S.

Wilson, Jas. S. Paris, Ky. (See Adv. Index Page 178)

LOUISIANA
Lehmann's Seed Store
Baton Rouge, La.
Reuter Seed Co.
New Orleans, La.
Steckler Seed Co., Inc., J.
New Orleans, La.
The New Orleans, La. Idlewild Dairy Farm, The (White Clover) Patterson, La.

MARYLAND

Baltimore Seed & Feed Co. Baltimore, Md. Belt Seed Co.

Baltimore, Md. Blamberg Bros., Inc.
Baltimore, Md.
(See Adv. Index Page 178)

Bolgiano Seed Co.,

Baltimore, Md.
Scarlett & Co., Wm. G.
Baltimore, Md.

MASSA'CHUSETTS

Breck & Sons Corp., Jos. Boston, Mass.
Dickinson Co., The Albert
Boston, Mass.
Emerson Co., Thos. W. Boston, Mass. Grey Co., Thos. J. Boston, Mass. Cobb. F. W.

Franklin, Mass.
Buck & Co., E. A.
Palmer, Mass.
Ross Bros. Co.
Worcester, Mass.

MICHIGAN

King & Sons, H. C.
Battle Creek, Mich.
(See Ady. Index Page 178) Detroit International Sales Co. Detroit, Mich.
Burroughs & Son, J. P.
Flint, Mich.
Isbell Seed Co.

Jackson, Mich.
(See Adv. Index Page 178)
McLaughlin Ward & Co.
Jackson, Mich.

Chatterton & Sons (Rosen Rye)
Lansing, Mich.
Young Seed Co., Geo. W.
Owosso, Mich.

# MORE THAN FOUR MILLION BUYERS

of seeds, plants, bulbs, nursery stock, pets and pet supplies, poultry supplies and various accessories, are patrons of SEED WORLD readers.

H.C.KING & SONS INC.

Battle Creek Michigan

—MICHIGAN GROWN—

RED CLOVER·····ROSEN RYE

MAMMOTH CLOVER·WINTER VETCH

Car Lots or Less

# DAVENPORT SEED COMPANY

Wholesale Field Seeds

TIMOTHY — RED CLOVER — ALSIKE SWEET CLOVER — ALFALFA — SUDAN

Carlots or Less - We Buy and Sell

DAVENPORT - - -

**IOWA** 

# BLAMBERG BROTHERS, Inc.

GARDEN AND FIELD SEEDS



Importers, Wholesalers and Growers

**BALTIMORE** 

**MARYLAND** 

Field Seeds Grass Seeds Poultry Feeds
Dog Feeds

D.O. COE SEED & GRAIN CO.

(SINCE 1902)

119 E. 6th

Topeka, Kan.

### WHOLESALE FIELD SEEDS-Continued

MINNESOTA

Lyman, A. B. (Grimm Alfalfa)
Excelsior, Minn.
Farmer Seed & Nursery Co.
Faribault, Minn.
(See Adv. Index Page 178)
Dickinson Co., The Albert
Minneapolis, Minn.
Minneapolis Seed Co.

Minneapolis Seed Co. Minneapolis, Minn

Minneapolis, Minn.
(See Adv. Index Page 178)
Northrup, King & Co.
Minneapolis, Minn.
(See Adv. Index Page 178)
Stuhr-Seidl Co.—Seed Oats
Minneapolis, Minn.
Interstate Seed & Grain Co.
Moorehead, Minn.
(See Adv. Index Page 178)
Olsen Co., N. J.
Moorhead, Minn.
Cashman Seed Co.
Owatonna, Minn.
Jameson-Hevener Co.

Jameson-Hevener Co. St. Paul, Minn. Waconia Sorghum Milis, Inc.—Sorghum

Waconia, Minn.
(See Adv. Index Page 178)
Peterson-Biddick Co.
Wadena, Minn.
Northern Field Seed Co.

Winona, Minn.

MISSISSIPPI

Rose Seed Co. Clarksdale, Miss. McInnis District Co. Meridian, Miss.

Meriuian, Miss.
Adams, J. B.
Pass Christian, Miss.
Vicksburg Seed Co.
Vicksburg, Miss.
Williams Co., P. P.
Vicksburg, Miss.

MISSOURI

Peppard Seed Co., J. G.
Kansas City, Mo.
(See Adv. Index Page 178)
Rudy-Patrick Seed Co.
Kansas City, Mo.
(See Adv. Index Page 178)

Chesmore Seed Co.
St. Joseph, Mo.
Kellogg-Kelly Seed Co.
St. Joseph, Mo.
Mitchelhill Seed Co.
St. Joseph, Mo.
Bushnell & Co., D. I.
St. Louis. Mo.

St. Louis, Mo.
Cornell Seed Co.
St. Louis, Mo.
(See Adv. Index Page 178)
Kaercher Seed & Supply Co.

St. Louis, Mo.
Mangelsdorf & Bro., Ed. F.

St. Louis, Mo.

(See Adv. Index Page 178)
Plant Seed Co.

St. Louis, Mo.
Prunty Seed & Grain Co.
St. Louis, Mo.
Springfield Seed Co.

Springfield, Mo. Wood-Beazley Seed Co.

Springfield, Mo.

MONTANA

Northern Montana Alfalfa Growers' Assn

Glasgow, Mont.
Barkemeyer Grain & Seed Co. Great Falls, Mont.
Snell Bros. (Grimm Alfalfa)
Miles City, Mont.

NEBRASKA

Gilmore, E. L. C. (Seed Corn)
Ashland, Neb.
Pease Grain & Seed Co.
Beatrice, Neb.
Sonderegger Seed & Nursery House

Beatrice, Neb.

Aye Bros.
Blair, Neb.
Platte Valley Seed Co.
Grand Island, Neb.
Towson Hardware Co.,

Lawson Hardware Co., C. K.
Hastings, Neb.
Patterson & Co.
Kearney, Neb.
Griswold Seed & Nursery Co.

Lincoln, Neb.

(See Adv. Index Page 178) Gunn Seed Co

Lincoln, Neb. Haley-Neeley Co. Norfolk, Neb. (See Adv. Index Page 178)

Nebraska Seed Co.

Omaha, Neb. Ranney Seed Co., C. A. Omaha, Neb.

NEW HAMPSHIRE

Holbrook Groc. Co. Keene, N. H. Varick Co., Jno. B. Manchester, N. H.

**NEW JERSEY** 

Riverview Farms
Bridgeton, N. J.
Doughten Seed Co., T.
Jersey City, N. J.

NEW MEXICO

Patterson Seed Co. Clovis, N. Mex.
Mitchell, E. W.
Roswell, N. Mex.

NEW YORK

Barber & Bennett, Inc. Albany, N. Y.
Hickox-Rumsey Co., Inc.
Batavia, N. Y.
Conklin & Son, E. W.

Binghamton, N. Y. Smith-Conklin Co. Binghamton, N. Y.

Binghamton, N. 1.

Banish Seed Growers Sales Co., Inc.

Brooklyn, N. Y.

(See Adv. Index Page 178)

Craver-Dickinson Seed Co.

Buffalo, N. Y.

Dickinson Co., The Albert

Buffalo, N. Y.

Lawron Soed Co.

Harvey Seed Co. Buffalo, N. Y.

(See Adv. Index Page 178)

# Patronize those who made it possible to publish this Directory.

See Advertisers' Index on page 178.



# Ed. F. Mangelsdorf & Bro.

Wholesale Field Seeds Cable Address: EMBRO-ST. LOUIS S. FIRST ST. ST. LOUIS, MO. 500 S. FIRST ST.

BUYERS—SELLERS **EXPORTERS** 

# Field Seeds

WE SPECIALIZE IN HARDY NORTHERN GROWN

Wholesale

SWEET CLOVER RED CLOVER ALSIKE TIMOTHY SEED GRAIN **POULTRY** MILLET

**MINNEAPOLIS** SEED CO.

MINNEAPOLIS, MINN.

# **SEEDS**

**Sweet Clover** Alfalfa Cane Millet

Ask for Samples and Prices

Carloads or Less

Griswold Seed and Nursery Co.

Lincoln, Nebr.

# Wholesale Seeds

Buvers and Sellers

FIELD SEEDS GARDEN SEED FODDER CROPS and SPECIALTIES

**&** 

CORNELI SEED COMPANY

St. Louis

### WHOLESALE FIELD SEEDS-Continued

Stanford Seed Co.
Buffalo, N. Y.
Whitney-Eckstein Seed Co. Buffalo, N. Y. Whitney-Noyes Co. Buffalo, N. Y. Pierpont & Smith Cassadaga, N. Y.

Forrest Seed Co., Inc.
Cortland, N. Y.

(See Adv. Index Page 178)

Butt Co., William D. Dalton, N. Y.
Page Seed Co.
Greene, N. Y.
(See Adv. Index Page 178)
Mastin, Cornelius H.
Varbungh Y. V. Newburgh, N. Vail, Harry
New Milford, N. Y.
Amtorg Trading Corporation
New York, N. Y.
(See Adv. Index Page 178) Coe Adv. Index Page 178)

Doughten Seed Co.
New York, N. Y.

Loechner & Co., Inc.
New York, N. Y.

(See Adv. Index Page 178)

Nungesser-Dickinson Seed Co.
New York, N. Y.

Scandinavian Seed Co.
New York, N. Y.

Steinhardter & Nordlinger
New York, N. Y.

Stumpp & Walter Co.
New York, N. Y.

(See Adv. Index Page 178)

Williamson, Garfield
New York, N. Y.

McCan, Jno. J.
Poughkeepsie, N. Y.

James Vick's Sons
Rochester, N. Y.

Metalle Seer Jac. P. P. Rochester, N. Y. Metcalf & Son, Inc., B. F. Syracuse, N. Y. Saul, C. F.

### Syracuse, N. Y. NORTH CAROLINA

Asheville Seed Co. Asheville Seed Co.
Asheville, N. C.
Buxton White Seed Co.
Elizabeth City, N. C.
Huske Hardware House
Fayetteville, N. C.
Catawba Seed Store
Hickory, N. C.
Parker & Co., J. H.
Newbern, N. C.
Wyatt & Sons Co. Loh P. Wyatt & Sons Co., Job P.
Raleigh, N. C.
Rowan Seed Store Salisbury, N. C. Roudabush & Co., W. P. Wilmington, N. C.

### NORTH DAKOTA

Dacotah Seed Co.
Bismarck, N. D.
(See Adv. Index Page 178) Interstate Seed & Grain Co. Fargo, N. D.

(See Adv. Index Page 178)

Magill & Co. (Operating Fargo Seed House)
Fargo, N. D.
(See Adv. Index Page 178)
Grand Forks Seed Co.
Grand Forks, N. D. Valker-Christensen Co. Minot, N. D.

Gerber & Son, Seth Baltic, Ohio Healy Seed Co. Belle Center, Ohio Holmes Seed Co. Canton, Ohio Haile & Sons, J. C. Cincinnati, Ohio

Market Gardeners' Seed Co. Cincinnati, Ohio

(See Adv. Index Page 178)

McCullough Seed Co., The J. Chas.

McCullough Seed Co., The J. Chas Cincinnati, Ohio.

McCullough's Sons Co., The J. M. Cincinnati, Ohio

(See Adv. Index Page 178)

Van Atta Seed Co., D. R. Cincinnati, Ohio

Botzum Seed Co.

Cleveland, Ohio

Chandlers Sons, C.

Cleveland, Ohio

Kelly Co., The

Cleveland, Ohio

Lorenz, Chas. E.

Coshocton, Ohio Coshocton, Ohio Davis, Henry
Findlay, Ohio
Hoyt Co., The A. C.
Fostoria, Ohio

O. & M. Seed Co. (Seed Oats and Seed Corn)
Green Springs, Ohio
(See Adv. Index Page 178)
Elkenberry Bros. Co.

(See Adv. Index Page 178)

Elkenberry Bros. Co.

Hamilton. Ohio

(See Adv. Index Page 178)

Lexington Elev. & Mill Co.

Lexington, Ohio

Ackerman Co., The

Lima. Ohio

(See Adv. Index Page 178)

Scott & Sons Co., O. M.

Marysville, Ohio

Shepard Co., O. C.

Medina, Ohio

Johnson, J. W.

Napoleon, Ohio

Scarff & Sons, W. N.

New Carlisle, Ohio

Bachrach & Co., M.

Plymouth, Ohio

Roberts & Harpster

Thornville, Ohio

Sneath-Cunningham Co.

Tiffin, Ohio

Saunders Seed Co.

Tippecanoe City, Ohio

Churchill Grain & Seed Co.

Toledo, Ohio

Churchill Grain
Toledo, Ohio
Flower Co., S. V
Toledo, Ohio

Hirsch & Sons, Henry Toledo, Ohio

(See Adv. Index Page 178)

# **USE THE STICKER!** (See page 179)

It is a guarantee of the best of service.

# Sweet Clover Seed Buy Hardy Northern Grown Seeds. We specialize in marketing seeds grown in our territory and under rigorous climatic conditions. We furnish these seeds in carloads but are always glad to quote on less than carload shipments also. Write for Quotations.

Sweet Clover—Bromus Inermus—Red Clover—Grimm Alfalfa—Timothy—Slender Wheat Grass

Established since 1887

MAGILL & CO., Operating Fargo Seed House, FARGO, N. DAK.



# Northern Grown Seed Grains

Such as

Seed Corn, Marquis Wheat, Seed Flax, Seed Oats, Seed Barley, Bromus Inermis, Wheat Grass, Alfalfa, etc.

We manufacture a complete line of Poultry and Stock Feed, and invite correspondence.

# DACOTAH SEED COMPANY,

Bismarck, No. Dakota



# THE EIKENBERRY STORES CHAIN STORE RETAILERS

Farm and Truck Seeds

and

All Seedmen's Side Lines

To Reach Purchasing Department address all correspondence

to

THE EIKENBERRY BROS. CO.
701 Maple Avenue HAMILTON, OHIO

# **GROWERS**

of

Field Corn
Garden Corn
Soybeans
Seed Oats

Correspondence Solicited

# THE O & M SEED COMPANY

Green Springs

Ohio

### WHOLESALE FIELD SEEDS-Continued

King & Co., C. A.
Toledo, Ohio
Premier Seed Co.
Toledo, Ohio Zahm & Co., J. F. Toledo, Ohio

Wooster Grain & Seed Co. Wooster, Ohio

### OKLAHOMA

Oklahoma Improved Seed Co. Chickasha, Okla. Binding-Stevens Co. Muskogee, Okla. Muskogee Seed House Muskogee, Okla. Binding-Stevens Seed Co. Tulsa, Okla.

### OREGON

Murphy Seed Store Albany, Ore.
Senders & Co., M.
Albany, Ore.
Hershberger, Lee L. Independence, Ore. Lilly Co., The Chas. H. Portland, Ore.

(See Adv. Index Page 178)

Portland Seed Co. Portland, Ore. White & Sons, D. A.
Salem, Ore.
Jenks White Seed Co. Salem, Ore.
Vollstedt, W. A.
Tangent, Ore.

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### PENNSYLVANIA

Klingler & Co., H. J. Butler, Pa. Schell, Inc., Walter S.

Harrisburg, Pa.

(See Adv. Index Page 178)

Hoffman, Inc., A. H.

Landisville, Pa.

Shenk & Sons, S. E.

Newville, Pa.

Atlantic Seed Co.

Philadalphia, Pa. Philadelphia, Pa. Philadelphia Seed Co.

Philadelphia, Pa. (See Adv. Index Page 178) Scaboard Seed Co.

Seaboard Seed Co.
Philadelphia, Pa.
(See Adv. Index Page 178)
Dickinson Co., The Albert
Pittsburgh, Pa.
Scott Co., I. W. Scott Co., I. W.
Pittsburgh, Pa.
Hertzog, H. F.
Reading, Pa.

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RHODES, PASPALUM, RESCUE. Ton lots direct import from Australia or from stock in San Francisco.

### RAFFIA

We are the largest handlers of raffia in America. We offer three dependable brands—hundred pound lots to carloads.

### GRANULATED PEAT

McH BRAND-finely pulverized in hundred kilo bales. Cheapest and best. Immediate shipping service. Carloads our specialty.

## **BAMBOO CANE STAKES**

JAPANESE NATURAL AND DYED GREEN, AND CHINESE CANES IN GREEN, AND BEST SIZES.

### **BULBS**

In Best Seed Store Grades

JAP, LILIES TULIPS HYACINTHS CROCUS NARCISSI T. R. BEGONIAS ADIOLI ALLEY PIPS

**GLOXINIAS FREESIAS** CALLAS LILIUM CANDIDUM LILIUM REGALE F. L. CALADIUMS PAPER WHITES

Tell Us Which of the Above Items Interest You and Get On Our Mailing List.

# McHUTCHISON & CO.

95 Chambers Street

New York, N. Y.

# SEED BAG TRIERS

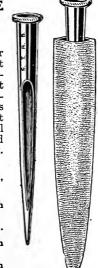
## QUICK, SAFE CON-VENIENT

Seed triers for quick, convenient drawing of samples without opening or tearing bag. Brass with steel point heavily nickel plated, with solid leather protector.

6 inches long, Price \$1.00 each, \$11.00 per doz.

9 in. long, with metal shield, Price \$2.00 each.

12 in. long, with metal shield, Price \$3.00 each



# SEED TRADE REPORTING BUREAU 1018 S. Wabash Ave. CHICAGO, ILL.

# SELECTED FRENCH SEEDS

DIRECT FROM THE GROWERS



ESTABLISHED 1749

# TEZIER FRERES

Wholesale Seed Growers & Exporters

VALENCE - SUR - RHONE

FRANCE ~>oc~

Vegetable & Flower Seeds

Clover & Grass Seeds

### CHARACTERISTICS OF VEGETABLE SEEDS

The figures in the following table are intended to be approximate only, as variations occur in varieties and are also due to conditions of growth, harvest and storage.

		Average		Average	J		
	Average	Duration of	_	Weight of		Amount	
Vegetable	Germination 1 Year Old	_	y Number of Seeds per	Quart of Seed in	Required for 100 Feet	of Seed required	Depth of Planting
	Seed	Years	Ounce	Ounces	of Drill	Per Acre	Lanung
Asparagus	90%	3	1,000	32	1 oz.	5 1bs.	1 in.
Beans, Dwarf	90%	3	100	30	1 lb.	60 lbs.	1 in.
Beans, Pole	90%	3	100	30	⅓ lb.	30 lbs.	1 in.
Beet, Garden	80%	4	1,750	10	1 oz.	6 1bs.	1 in.
Beet, Mangel	80%	4	1,200	10	1 oz.	5 lbs.	1 in.
Brussels Sprouts	85%	4	6,500	24	¼ oz.	2 oz.	√2 in.
Cabbage	85%	4	5,000	24	¼ oz.	4 oz.	½ in.
Carrot	•	3	14,000	12	½ oz.	21bs.	½ in.
Cauliflower		4	14,000	24	¼ oz.	1 oz.	⅓ in.
Celery		3	100,000	16	¼ oz.	4 oz.	⅓ in.
Collards	88%	3	4,500	24	¼ oz.	4 oz.	⅓ in.
Corn, Sweet	85%	3	125	23	⅓ 1b.	12 lbs.	1 in.
Cucumber	85%	5	1,000	18	½ oz.	21bs.	1 in.
Eggplant	75%	4	5,000	18	½ oz.	4 oz.	½ in.
Endive	80%	5	13,500	12	1 oz.	2 lbs.	½ in.
Kale	85%	4	7,500	24	¼ oz.	1 lb.	½ in.
Kohlrabi		3	7,000	24	¼ oz.	1 1b.	½ in.
Leek	80%	2	8,000	18	½ oz.	4 1bs.	½ in.
Lettuce	90%	6	16,000	14	½ oz.	3 lbs.	½ in.
Melon, Musk	85%	5	1,200	12	½ oz.	2 lbs.	1 in.
Melon, Water	85%	5	225	16	1 oz.	2 lbs.	1 in.
Mustard	85%	3	18,000	30	¼ oz.	1 lb.	1/4 in.
Okra	85%	1	425	20	2 oz.	8 lbs.	1 in.
Onion	80%	2	12,500	16	1 oz.	4 lbs.	½ in.
Parsley	•	1	17,500	12	¼ oz.	3 lbs.	1∕8 in.
Parsnip		1	2,800	10	½ oz.	3 lbs.	½ in.
Peas	90%	3 5	50 to 150	30	1 lb.	60 lbs.	1 in.
Pepper	75%	2	4,000	16	½ oz.	2 oz.	½ in.
Pumpkin	90%	4	100	9	½ oz.	4 lbs.	1 in.
Radish	90%	4	5,000	24	1 oz.	10 lbs.	½ in.
Salsify	75%	1	4,500	12	1 oz.	8 lbs.	½ in.
Spinach	80%	3	3,000	14	1 oz.	8 1bs.	1 in.
Squash, Summer	90%	4	300	20	½ oz.	4 lbs.	1 in.
Squash, Winter .	90%	4	125	- 14	½ oz.	2 lbs.	1 in.
Tomato	85%	3	7,500	10	⅓ oz.	1½ oz.	½ in.
Turnip	90%	4	10,000	24	½ oz.	11ь.	1/4 in.

Over four million buyers of seeds, plants, bulbs, nursery stock, pets, poultry supplies and accessories for same are patrons of SEED WORLD readers.

# WHOLESALE SEED GROWER

# Specialties:

BEET CARROT CELERY ENDIVE LETTUCE MUSTARD ONION PARSLEY PARSNIP RADISH

SALSIFY MIXED SWEET PEAS

Contract Prices for Crop 1929 Mailed on Application

GILROY, CALIF.

HOLLISTER, CALIF.

# WALDO ROHNERT

GILROY

**CALIFORNIA** 

# ASPARAGUS Roots and Seeds

Shedakers Ped Washington and Mary Washington roots, grown on the famous Riverdale farms by the largest growers of asparagus roots in the world.

B. D. Shedaker & Son

Burlington

New Jersey

The C. Herbert Coy Seed Co., Inc. Valley, Nebraska

Growers of

Sweet, Flint and Dent

**SEED CORN** 

Also

Cucumber, Muskmelon, Watermelon, Squash, Pumpkin and Gourd.

WHOLESALE ONLY

# VEGETABLE PLANTING TABLE

- Pi	Ready for use		2 years 1 year	42 to 75 days	45 to 60 days 100 to 120 days	Feb.) 90 to 110 days 110 to 120 days 55 to 80 days 95 to 110 days tart in	Apr.) 120 to 150 days 100 to 120 days 5. to 90 days 60 to 70 days 6. to 70 days 7. trin 50 to 70 days 7. trin 50 to 70 days	Mar.) 125 to 140 days	55 to 60 days   50 to 60 days   50 to 70 days   70 to 90 days   70 to 90 days   85 to 150 days   15 cpt   60 to 90 days   60 to 140 days   70 to 150 days   7	100 days 100 days 100 days 100 days 100 days 100 days 100 days 100 days 100 days 100 days	hotbed   130 to 150 days   90 to 150 days   150 days	
Time of planting in open ground		North	Early spring Early spring	April to July May and June	April to August May and June Mar. and Apr. (Start	hotbed during Feb. May and June. April to June. April to June. May & June.	hotbed or cold frama during Mar. or Apr.) Late spring.  May to July April to Sept April to Nav. (Start in	hotbed during Mar. April [July].	and April] March to May March to May March to Sept April to June May and June May and June May and June April to May Hop	May April Sept. and early spring April and May March to June. May and June. (Start	early plants in I during March) March to June May and June	
Time of plantii		South	Autumn or early sp'ng Autumn or early sp'ng Feb. to April (Aug. to	Sept.). Late spring. Feb. to April (Aug. to	Sept.) Jan. to July Oct. to Dec.	June and July	May and June. Feb. to April. Early spring. Feb. and Mar. [Sept.]	Feb. to April. Oct. to Feb.	Sept. to May May to Sept. Sept. to March Feb. to April. March to May Antumn or early sp'ng Feb. to April. Oct. to March	Early spring Sept. to May March and April Sept. to April Early spring	Jan. to April April and May	Pollowing Page
estr .	Depth of	0	1 in 3 to 5 in 1 in 1	lin In	½ in	BBB. %2222	½ in 1 in water 1 in 5 in		. P. P. B.	%~%%% F. B. B. B.	4 in	ntinned on F
to stand	Ē	Fiants apart in rows	3 in. 15 to 20 in. 2 in.			16 to 24 in 2 in 14 to 18 in 2 in	14 to 18 in 4 to every 3 ft 4 every 3 ft	12 in18 in	6 in	72 in 3 in. 2 in. 1 in. 15 in.	14 in	ng Table Co
Distance for plants to stand	Rows apart	Hand culti- vation	1 to 2 ft 12 to 24 in	3 to 4 ft	24 to 30 in	24 to 36 in 18 to 24 in 24 to 30 in	24 to 30 in 30 to 36 in 4 to 6 ft 24 to 30 in		18 to 24 in 14 to 20 in 12 to 18 in 16 to 8 ft. 18 to 12 ft. 12 to 18 in 3 to 4 ft. 12 to 18 in	12 to 18 in 12 to 18 in 18 to 24 in 30 to 36 in	24 to 36 in	This Vegetable Planting Table Continued on Rollowing
Dista	Rows	Horse culti- vation	30 to 36 in 3 to 5 ft. 30 to 36 in	3 to 4 ft 28 to 36 in	30 to 36 in	30 to 40 in 30 to 36 in 30 to 36 in	30 to 36 in 36 to 42 in Broadcast 4 to 6 ft 30 to 36 in	30 in	30 to 36 in 30 to 36 in 30 in 30 in 30 in 50 in	24 to 36 in 24 to 36 in 30 to 36 in 3 to 4 ft 30 to 36 in	30 to 36 in 3 to 5 ft	This Veg
	One	BIOW	5 lbs 1 bu	½ bu6 lbs	2 oz 14 lb	% lb1 oz1 oz1 % lb %	74 lb. 6 qts. 2 lbs. 74 lb.	2 lbs	1 1b. 4 1bs. 3 1bs. 2 1bs. 2 1bs. 1 1b. 1 1b. 8 1bs.	50 lbs3 lbs3 lbs1 bu2 oz.	16 bu	
Seeds or	quired for 100 ft	of drill	1 oz	½ pt 1 oz	% % % % % % % % % % % % % % % % % % %	7 02 7 02 7 02 7 02 7 02	747778 2 tt 20 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 oz	74 02 75 02 75 02 75 02 11 02 12 02 11 02	11b. 1/4 oz. 1/2 oz. 1 pt. 1/8 oz.	5 lbs 3 lbs(or75 slips)	
	Kind of vegetable		Asparagus, seed Asparagus, roots Beans, dwarf	Beans, pole	Brussels sprouts	Cabbage, late Carrot Cauliflower Celery	Collards Corn, sweet Cress, water Cucumber Eggplant	EndiveKale, or borecole	Kohl-rabi	Onion seed for sets. 11b. Parsley 7,4 oz Parsmp 7,5 oz Peas. 1ppt. Pepper 1,5 oz	Potatoes, Irish	

# Sioux City Seed Co.

Sioux City, Iowa

45 Years Experience as Growers for the Wholesale Trade

# Peas — Beans — Sweet Corn

We Solicit Your Inquiries for Spot Orders or Contracts Growing Stations—Sioux City, Ia.; St. Anthony, Idaho; Billings, Mont.; Millington, Mich.

Since 1880

# GEORGE R. PEDRICK & SON

WHOLESALE SEED GROWERS

### **SPECIALTIES**

TOMATO PEPPER EGG PLANT ASPARAGUS RHUBARB OKRA BEANS CORN VINE SEEDS AND MANY OTHER VEGETABLE SEEDS AND ROOTS

May we quote you on your requirements of High Grade Seeds?

# GEORGE R. PEDRICK & SON

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# DANISH SEED GROWERS SALES CO., Inc. 4407 Sixth Avenue

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UNITED STATES OFFICE: R. Wiboltts Frøavl og Frøhandel, Nakskov, Denmark

Headquarters for:

Wiboltts famous Express Snowball Cauliflower, Cabbage, Turnips, and all vegetable seeds

Danish grown Orchardgrass, Poa Trivialis, and all varieties of Danish grass seed.

# BUIST'S GARDEN SEEDS

Grown from Selected Stocks Famous for Purity and Vitality

Write for quotations before placing your order

ROBERT BUIST CO. PHILADELPHIA, PA.

Seedsmen Since 1828

# Vegetable Planting Table—Continued from Preceding Page

			Dista	Distance for plants to stand	o stand					
Seeds or roots re-	<b>u</b> ,	One	Rows	Rows apart		Denth of	Time of planting in open ground	III open ground	Ready for use	
quir	pe	ν οπο	THOUS .	a moder c	Plants apart	planting			after planting	
for 100 ft. of drill	off.	Acre	Horse culti- vation	Hand culti- vation	in rows	pianing	South	North		
1/2 oz.		4 lbs	8 to 12 ft	8 to 12 ft	4 every 6 ft	1 in	umpkin	May to July	75 to 90 days	
Rhubarb, seed		10 103	36 in	30 to 36 in	6 in	7, to 1 iii.	10 105	Early spring	3 years	
hubarb, roots 33 roots	S		3 to 5 ft	3 to 5 ft.	3 ft	2 to 3 in	3 to 5 ft. 3 to 5 ft. Autumn or early spr'g 1 year	Autumn or early spr'g	1 year	
uta-baga		2 lbs	30 to 36 in	18 to 24 in	6 in	1/2 to 1 in	Aug. and Sept	May and June	90 days	
l oz	alsify	8 lbs	30 to 36 in	18 to 24 in	2 in	1/2 in	8 lbs   30 to 36 in   18 to 24 in   2 in   1/2 in   1/2 in   150 days	Early spring	150 days	
1 oz.	pinach 1 oz	8 Ibs	30 to 36 in	12 to 18 in	2 in	1 in	Sept. to Feb	Sept. or very e'ly sp'g	45 days is min.	
1/2 oz.	Squash, summer 1/2 oz	4 lbs	3 to 4 ft	3 to 4 ft	4 every 4 ft	1 in	Spring	April to June	65 to 70 days	
1/2 OZ		2 lbs	7 to 10 ft	7 to 10 ft	4 every 6 ft	1 in	Spring	May to July	125 days	
78 oz.	omato	1½ oz	3 to 5 ft	3 to 4 ft	3 by 4 ft	1/2 in	1½ oz 3 to 5 ft 3 to 4 ft 3 by 4 ft 25 in Dec. to March May to June 125 to 150 days	May to June	125 to 150 days	
1/2 OZ	urnip.	1 Ib	24 to 36 in	18 to 24 in	2 in	7 in	1 lb 24 to 36 in   18 to 24 in   2 in   18 to 24 in   24 in   Aug., to Oct   April and Aug   45 to 90 days	April and Aug	45 to 90 days	

# Helpful Hints to Vegetable Gardeners

kled peas, and vine crops.

NECIDE early how much ground you will use and what you will plant.

Plow or spade before the ground freezes, if you can. A little fertilizer or manure will insure better crops.

Don't cover the seed too deep. It will germinate more quickly if only a little soil is on the seed. See full cultural directions on the packets.

Leave the garden alone until the plants come up. If you have sown bulk seeds, thin rows after plants are up an inch or two. Using seed-tape reduces thinning to a minimum.

Lima beans should be planted with the eye down and covered one inch deep.

Sow radishes directly in the row with

Order your seeds early so that you can take advantage of the first signs of spring.

When you water, do it thoroughly-don't

sprinkle, soak.

A small hand cultivator will make you feel like a professional gardener. It soon pay for itself, too. Plant early everything but beans, wrin-If soil is dry, water may be put on. Let

Don't try "watchful waiting" for bugs, worms and other vermin. Swat 'em or they will spoil your plants. it run slowly and don't spare the water-

Plant small, quick growers like lettuce, radishes, etc., between the rows of larger, slower maturing sorts. In the case of early sorts such as spinach, start tomatoes, corn, etc., between the rows to occupy the ground after the former is harvested. You will have a better garden if you use Don't think water will take the place of Weeds are garden robbers. Kill them For large head lettuce, thin out to at least

the hoes more, and the hose less.

when they are small.

six inches.

thorough cultivation—it won't.

it's cheap.

Never cultivate or handle any kind of beans when the vines are wet. This is the easiest way to spread a serious disease and ruin the crop.

To ensure a succession of such plants as Success against weeds means keeping peas, beans, lettuce, radishes, beets, kohlrabi, them out, not taking them out after they get in.

etc., sow a fresh row every week or so. Buy only first-class, reputable materials, even if it means less of them. Hoe often to loosen the soil and hold You cannot do good work with poor tools. moisture around the roots of the plants. Get a good spray and use it. home canning.

Have a good hoe, rake, fork and spade.

Plant enough to have some vegetables for



## PAGE'S Standard SEEDS

VEGETABLE AND FLOWERS SEED CORN-OATS-MILLET



Wholesale Only

THE PAGE SEED CO., Greene, N. Y.

## **GOOD**

VEGETABLE and FLOWER SEEDS



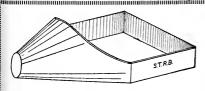
## **SEED**

SEED CORN and ALFALFA

Wholesalers, Importers, Growers

## THE FORREST SEED CO., Inc.

CORTLAND, N. Y.



## SEED AND GRAIN SAMPLE PANS

For containing grain or seed after sampling. Advantageous in making analyses and for display. Seamless Wellsville steel—dark blue and nonglaring.

No. 31—12x16x2 in.—3 qts. wheat capacity. Price each, \$1.50; half dozen, \$8.50.

No. 32—8½x12x1½ in.—1½ qts. wheat capacity. Price each, \$1.25; half dozen, \$7.00.

No. 33—Same as No. 32, Aluminum, \$1.50.

## SEED TRADE REPORTING BUREAU

1018 South Wabash Avenue CHICAGO, ILL.

### SEED GROWER

Specializing in

TOMATO PEPPER

and

**EGG PLANT** 

EDGAR F. HURFF SWEDESBORO

NEW JERSEY

#### IMPORTS AND PRICES OF VEGETABLE SEEDS

Compiled from figures published by Department of Commerce.

		Imports—Calendar Years—					Average Prices†				
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Per 1b.	Per 1b.	Per lb.	Per 1b.	Per lb.	
Kind of Seed-	1924	1925	1926	1927	1928*	1924	1925	1926	1927	1928	
Beet, garden	423,057	278,753	390,042	327,268	203,465	\$.15	\$.157	\$.154	\$.163	\$.158	
Beet, mangel	297,684	206,707	412,397	228,971	150,180	.114	.128	.102	.102	.111	
Cabbage	209,592	125,428	326,625	275,341	119,557	.437	.496	.537	.535	.522	
Carrot	134,206	40,838	57,525	29,059	41,501	.273	.402	.379	.496	.348	
Cauliflower	13,754	9,043	21,883	16,643	3,553	6.06	6.93	6.30	6.396	8.391	
Kale	50,421	24,787	64,760	48,025	14,458	.197	.216	.193	.18	.208	
Kohlrabi	13,376	6,732	15,360	11,822	3,755	.451	.449	.439	.488	.524	
Onion	104,027	17,378	360,961	252,203	21,201	1.00	.954	1.29	1.826	.612	
Parsley	146,782	332,680	295,685	95,500	409,830	.122	.135	.115	.167	.136	
Parsnip	57,974	35,922	41,653	32,081	13,675	.158	.145	.120	.107	.149	
Pepper	3,276	2,541	5,585	3,921	1,712	.691	.654	.581	.677	.871	
Radish	651,061	413,622	1,010,552	742,178	279,850	.168	.182	.160	.158	.162	
Spinach2	,685,972	618,886	2,471,760	2,085,764	595,193	.083	.091	.092	.093	.114	
Turnip1	,349,960	608,976	1,914,128	1,145,517	629,649	.116	.129	.112	.113	.111	
Rutabaga	200,693	75,500	385,855	201,166	58,063	.12	.137	.111	.110	.127	

<sup>\*</sup>Six months ending June 30, 1928. †All prices are F. O. B. port of origin and not including duty.



TOMATO SEED HARVEST SCENE

#### TOMATO SEED

OUR SPECIALTY

We also grow HIGH QUALITY BUSH LIMA BEAN SEED BURPEE — BURPEE IMPROVED — FORDHOOK

#### HAVEN SEED COMPANY

SANTA ANA

Wholesale Seed Growers

CALIFORNIA

Stockton California

# Growers

Vegetable Seeds

**SPOT** 

Cable Address "Stanseed"

**CONTRACT** 

Post Office Box 577

## BERTRAND SEED CO.

WHOLESALE GROWERS

CALIFORNIA GARDEN SEEDS PEAS AND BEANS

SAN FRANCISCO, CAL.

## SEED GROWERS — BULB GROWERS

Dealers and Importers
Field Garden and Flower Seeds
WHOLESALE AND RETAIL

Aggeler & Musser Seed Co.

LOS ANGELES, CALIF.

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Anniston, Ala. Poyner Seed Co. Dothan, Ala.

North Alabama Seed Co. Florence, Ala.

Wind & Co.,

Huntsville, Ala.

Van Antwerp's Seed Store Mobile, Ala.

(See Adv. Index Page 178)

Hawthorne-Jones Co., Inc. Montgomery, Ala.

ARKANSAS

Fort Smith Seed Co., Inc. Fort Smith, Ark.

CALIFORNIA

Cuff-Archias Seed Co.
Brawley, Calif.
Fish, Henry Berrien (Beans)
Carpinteria, Calif.

(See Adv. Index Page 178)

Golden State Seed Co. Coyotes, Cal.

Aggeler & Musser Seed Co., Inc. Los Angeles, Cal. (See Adv. Index Page 178)

Bodger & Sons Co., John El Monte, Los Angeles County, Calif. (See Adv. Index Page 178)

Germain Seed & Plant Co. Los Angeles, Cal.
(See Adv. Index Page 178)

Los Angeles Seed Co., Inc. Los Angeles, Cal.

Morris & Snow Seed Co.

Los Angeles, Calif.

Winsel, Chas. Los Angeles, Cal.

Lagomarsino & Sons, F.
Sacramento, Cal.
(See Adv. Index Page 178)

Laughlin Seed Co. (Onion)
Sacramento, Calif.
Ward Seed Co., Wm. A.
Sacramento. Calif.
(See Adv. Index Page 178)

Bertrand Seed Co. San Francisco, Calif. (See Adv. Index Page 178)

McGill Seed Co., R. C. San Francisco, Calif. (See Adv. Index Page 178)

Morse & Co., C. C. San Francisco, Cal. (See Adv. Index Page 178)

Oriental Seed Co.

San Francisco, Cal. Pacific Seed Growers San Francisco, Calif.

Sherwood Seed Co. San Francisco, Calif.

California Seed Growers Assn., Inc. San Jose, Calif.

Haven Seed Co. (Tomatoes)
Santa Ana, Calif. (See Adv. Index Page 178)

Fish Seed Co., Henry (Beans)
Santa Barbara, Calif.
(See Adv. Index Page 178)

Knox Seed Co. Stockton, Calif. Standard Seed Farms Co. Stockton, Cal. (See Adv. Index Page 178)

Hogue-Kellogg Co., The Ventura, Calif. (See Adv. Index Page 178)

CANADA

McKenzie Co., Ltd., A. E. Brandon, Manitoba, Can.

Bruce & Co., Ltd., John A. Hamilton, Ont., Can. (See Adv. Index Page 178)

Gold Medal People, Ltd. Toronto, Canada

Keith & Sons, Geo. Toronto, Canada

Rennie Co., Ltd., Wm. Toronto, Canada

Steele, Briggs Seed Co., Ltd. Toronto, Canada (See Adv. Index Page 178)

COLORADO

Barteldes Seed Co. Denver, Colo.

Burton Seed Co. Denver, Colo.

Colorado Seed Co. Denver, Colo. Western Seed Co.

Denver, Colo.

Grand Junction Seed Co. Grand Junction, Colo. (See Adv. Index Page 178)

Burrell, D. V. Rocky Ford, Colo.

Ebbert Seed Co. Rocky Ford, Colo.

James, R. H. Rocky Ford, Colo.

CONNECTICUT

Associated Seed Growers, Inc. New Haven, Conn.

Platt Company, Frank S. New Haven, Conn.

Woodruff & Sons, S. D. Orange, Conn. (See Adv. Index Page 178)

Comstock, Ferre & Co. Wethersfield, Conn. (See Adv. Index Page 178)

Hart Seed Co., Chas. C. Wethersfield, Conn. (See Adv. Index Page 178)

DELAWARE

Boggs & Son, Caleb Cheswold, Del.

DISTRICT OF COLUMBIA

Bolgiano & Co., F. W. Washington, D. C.

FLORIDA

Martin Seed Co., E. Jacksonville, Fla. Evans Seed Co.

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## MOUNTAIN GROWN SEEDS



Earlier Maturity, Stronger Vitality and Freedom from Fungus Diseases combined with careful breeding and type selection.
"MILE HIGH" SEEDS

Growing—Sweet Corn, Cucumber, Lettuce, Muskmelon, Cantaloupe, Onion, Pepper, Pumpkin, Squash, Tomato, Columbine, Zinnia, etc.
Shipping Carlots—Alfalfa, Red and Sweet Clover, Heavy Mountain Seed Oats, Barley, Beans, etc.

THE GRAND JUNCTION SEED CO., Grand Junction, Colorado

## COMSTOCK, FERRE & CO.

Wethersfield, Conn.

GARDEN SEED PEAS AND BEANS ONION SEED FLOWER SEED SWEET CORN ONION SETS

Connecticut grown Tobacco Seed Havana and Connecticut Seed Leaf

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**ESTABLISHED 1820** 

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BEET BEANS CARROT CELERY

## ONION

LETTUCE RADISH PEAS IN VARIETY

## The R.C. McGILL SEED CO.

WHOLESALE SEED GROWERS

San Francisco

"We have been improving Seeds since 1912"

## S E E D BEANS

Garden Varieties

SUPERIOR TYPES HIGH QUALITY ROGUED STOCKS

### HENRY BERRIEN FISH

Wholesale Grower
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#### WHOLESALE GARDEN SEEDS-Continued

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Darrow Bros. Seed & Supply Co. Twin Falls, Idaho

ILLINOIS

Barnard Co., The W. W. Chicago, Ill. (See Adv. Index Page 178)

Hollenbach, Peter (Onion Sets)

Chicago, Ill. (See Adv. Index Page 178)

Leonard Seed Co.

Chicago, Ill. (See Adv. Index Page 178)

Quality Seed & Bulb Co. Chicago, Ill.

Rogers Bros. Seed Co. Chicago, Ill. (See Adv. Index Page 178)

Vaughan's Seed Store Chicago, Ill.

Condon Bros.

Rockford, Ill.

(See Adv. Index Page 178)

Rockford Seed Co. Rockford, Ill.

INDIANA

Crabbs, Reynolds, Taylor Co. Crawfordsville, Ind.

Ohio Valley Seed Co. Evansville, Ind.

Williamson, E. B. Goshen, Ind.

Warren Seed Co. Indianapolis, Ind.

IOWA.

Iowa Seed Co.

Des Moines, Iowa

Sioux City Seed Co. Sioux City, Iowa (See Adv. Index Page 178)

KANSAS

Mangelsdorf Seed Co. Atchison, Kan.

Barteldes Seed Co. Lawrence, Kan.

Coe Seed & Grain Co., D. O. Topeka, Kan. (See Adv. Index Page 178)

Ross Bros. Seed Co. Wichita, Kan.

KENTUCKY

Brent Seed Co., C. S. Lexington, Ky.

Hall Seed Co.

Louisville, Ky.

(See Adv. Index Page 178)
Wood, Stubbs & Co.

Louisville, Ky.

LOUISIANA

Reuter Seed Co.

New Orleans, La.
Steckler Seed Co., Inc., J.
New Orleans, La.

MARYLAND

Blamberg Brothers, Inc.

Baltimore, Md. (See Adv Index Page 178)

Bolgiano Seed Co., J. Baltimore, Md.

Griffith & Turner Co. Baltimore, Md.

Manns & Co., J. Baltimore, Md.

MASSACHUSETTS

Breck & Sons, Joseph Boston, Mass.

Emerson Co., Thos. W.
Boston, Mass.
Perry Seed Co.
Boston, Mass.

Grey Co., Thos. J. Boston, Mass.

Ross Bros. Co. Worcester, Mass.

MICHIGAN

American Seed Co. Detroit, Mich.

Detroit International Sales Co.

Detroit, Mich.

Ferry & Co., D. M. Detroit, Mich.

Brown Seed Co., Alfred J. Grand Rapids, Mich. (See Adv. Index Page 178)

Brown & Son, Inc., A. J. (Peas and Beans) Grand Rapids, Mich.

Isbell Seed Co.

Jackson, Mich. (See Adv. Index Page 178)

MINNESOTA

Farmer Seed & Nursery Co.

Faribault, Minn. (See Adv. Index Page 178)

Minnetonka Gladiolus Farms R. 3, Hopkins, Minn.

Northrup, King & Co. Minneapolis, Minn. (See Adv. Index Page 178)

MISSISSIPPI

Rose Seed Co. Clarksdale, Miss. Taylor-Tucker Seed Co.

Jackson, Miss. Kimbrough Seed Co.

Meridian, Miss.

MISSOURI

Rudy-Patrick Seed Co. Kansas City, Mo.

(See Adv. Index Page 178)

Chesmore Seed Co.
St. Joseph, Mo.
Corneli Seed Co.
St. Louis, Mo.
(See Adv. Index Page 178)

Kaercher Seed & Supply Co. St. Louis, Mo.

United States Seed Co. St. Louis, Mo.

MONTANA

Barkemeyer Grain & Seed Co. Great Falls, Mont.

State Nursery & Seed Co. Helena, Mont.

NEBRASKA

Western Seed & Irrigation Co. Fremont, Neb. (See Adv. Index Page 178)

Griswold Seed & Nursery Co.

Lincoln, Neb.
(See Adv. Index Page 178)
Gunn Seed Co.
Lincoln, Neb.

Nebraska Seed Co.

Omaha, Neb.

Ranney Seed Co., C. A. Omaha, Neb.

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Bridgeton, N. J.
Shedaker & Son, B. D.
Burlington, N. J.
(See Adv. Index Page 178)

Taylor Bros.

Camden, N. J.
Pedrick & Son, Geo. R.
Pedricktown, N. J.
(See Adv. Index Page 178)
Huff, Edgar F.

Swedesboro, N. J. (See Adv. Index Page 178)

NEW HAMPSHIRE

Holbrook Grocery Co. Keene, N. H.

NEW YORK

Danish Seed Growers Sales Co., Inc.
Brooklyn, N. Y.
(See Adv. Index Page 178)
Harvey Seed Co.
Buffalo, N. Y.
(See Adv. Index Page 178)

(See Adv. Index Page 178)
Rice Seed Co., Jerome B.
Cambridge, N. Y.
(See Adv. Index Page 178)
Forrest Seed Co., Inc.
Cortland, N. Y.
(See Adv. Index Page 178)
Burt, William D.
Dalton, N. Y.
Denison Seed Co., W. A.
Ellisburg, N. Y.
Page Seed Co.
Greene, N. Y.
(See Adv. Index Page 178)
Lupton & Son, J. M.
Mattituck, L. I., N. Y.
(See Front Cover)
Mastin, Cornelius H.
Newburgh, N. Y.
Amtorg Trading Corporation

Amtorg Trading Corporation
New York, N. Y.
(See Adv. Index Page 178)

Henry & Lee New York, N. Y.

Herbst Bros.

New York, N. Y.
(See Adv. Index Page 178)

New York, N. Y.

(See Adv. Index Page 178)

Holst-Knudsen, S.
New York, N. Y.

Loechner & Co., Inc.
New York, N. Y.

(See Adv. Index Page 178)

Madsen & Co., Thos.
New York, N. Y.

Steinhardter & Nordlinger
New York, N. Y.

Stumpp & Walter Co.
New York, N. Y.

(See Adv. Index Page 178)

Vaughan's Seed Store
New York, N. Y.

Williamson, Garfield
New York City

Vick's Sons, James
Rochester, N. Y.

Metcalf & Son, Inc., B. F.
Syracuse, N. Y.

Saul, C. F.
Syracuse, N. Y.

#### NORTH CAROLINA

Asheville Seed Co.
Asheville, N. C.
Buxton White Seed Co.
Elizabeth City, N. C.
Huske Hdwe. Co.
Fayetteville, N. C.
Wyatt & Sons Co., Job P.
Raleigh, N. C.
Roudabush & Co., W. P.
Wilmington, N. C.

NORTH DAKOTA

Will & Co., Oscar H.

Bismarck, N. D Magill & Co. (Operating Fargo Seed

House)

Fargo, N. D. (See Adv. Index Page 178)

**0HIO** 

Botzum Seed Co.

Akron, Ohio
Miller, Seedsman, Wm.
Bellefontaine, Ohio

Bellefontaine, Ohio
Holmes Seed Co.
Canton, Ohio
Holmes-Letherman Seed Co.
Canton, Ohio
Schilder Bros. (Onion Seed and Sets)
Chillicothe, Ohio
McCullough Seed Co., J. Chas.
Cincipnati Ohio

Cincinnati, Ohio
McCullough's Sons Co., J. M.
Cincinnati, Ohio
(See Adv. Index Page 178)
Market Gardener's Seed Co.

Cincinnati, Ohio
(See Adv. Index Page 178)
Botzum Seed Co.

Cleveland, Ohio Johnson's Seed Store

Cleveland, Ohio Davis, Zack Delaware, Ohio

#### OKLAHOMA

Muskogee Seed House Muskogee, Okla. Binding-Stevens Seed Co. Tulsa, Okla.

OREGON

Gili Bros. Seed Co.
Portland, Ore.
Lilly Co., The Chas. H.
Portland, Ore.
(See Adv. Index Page 178)
Portland Seed Co.

Portland, Ore.
Routledge Seed & Floral Co. Portland, Ore.

#### PENNSYLVANIA

Landreth Seed Co., D. Bristol, Pa.

(See Adv. Index Page 178) Schell, Inc., Walter S.

Harrisburg, Pa. (See Adv. Index Page 178)

Ruist Co., Robert

Ruist Co., Robert
Philadelphia, Pa.
(See Adv. Index Page 178)
Burpec Co., W. Atlee
Philadelphia, Pa.
(See Adv. Index Page 178)
Simon & Son, I. N.
Philadelphia, Pa.
(See Adv. Index Page 178)
Scott Co., I. W.
Pittsburgh, Pa.
Hertzog, H. F.

Hertzog, H. F. Reading, Pa.

SOUTH CAROLINA

Mixson Seed Co., W. H. Charleston, S. C. Kirkland Seed Co., B. B. Columbia, S. C.

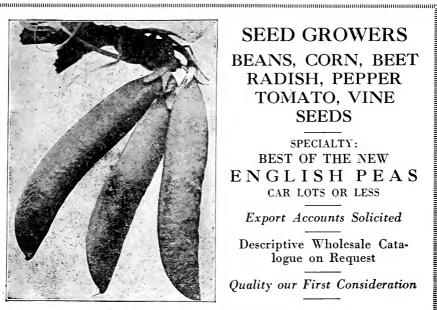
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Gurney Seed & Nursery Co. Yankton, S. D.

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Buchanan Seed Company, R. B.
Memphis, Tenn.
Craig & Co., R. G.
Memphis, Tenn.
Mosby Seed Co., John
Memphis, Tenn.
Russell-Heckle Seed Co.
Memphis, Tenn.
Schwill & Co., Otto

Schwill & Co., Otto Memphis, Tenn.

Schwill & Co., Otto.

Memphis, Tenn.
Hill & Co., Chas. A.
Nashville, Tenn.
Rose & Co., G. P.
Nashville, Tenn.
Collins Company, The
Winchester, Tenn.

#### TEXAS

Sullivan, J. G. (Onion Seed)
Asherton, Texas
(See Adv. Index Page 178)
Nicholson Seed Co., Robert Dallas, Texas
Wise Seed Co., W. D.
El Paso, Texas
American Seed Co.
Fort Worth, Texas
Sherman Magnolia Seed Co.

UTAH

Carpenter Seed Co.
Provo, Utah
Bailey & Sons Co.
Salt Lake City, Utah
Filer Seed Co.
Salt Lake City, Utah
Porter-Walton Seed Co.
Salt Lake City, Utah

Dallas, Texas.

VIRGINIA

Wetsel Seed Co. Harrisonburg, Tait & Sons, Geo.
Norfolk, Va.
Warren & Co., D. W.
Norfolk, Va. Williams Seed Co. Norfolk, Va. Fairfax Seed Co. Oakton, Va. Diggs & Beadles Richmond, Va.
Wood & Sons, T. W.
Richmond, Va. Slate Seed Co. (Tobacco)

#### South Boston, WASHINGTON

Christianson & Co., Alf Mt. Vernon, Wash. Lilly Co., Chas H. Seattle, Wash. (See Adv. Index Page 178) Inland Seed Co. Spokane, Wash. Spokane Seed Co. Spokane, Wash.

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Carpinteria, Cal.
(See Adv. Index Page 178)
Golden State Seed Co.
Coyote, Cal.

Pieters-Wheeler Seed Co.

Gilroy, Cal. (See Adv. Index Page 178)

Rohnert, Waldo Gilroy, Cal.

(See Adv. Index Page 178)

Richard Diener Co., Inc. Kentfield, Cal.

Aggeler & Musser Seed Co., Inc. Los Angeles, Cal. (See Adv. Index Page 178)

Bodger & Sons Co., John El Monte, Los Angeles County, Calif. (See Adv. Index Page 178)

Germain Seed & Plant Co. Los Angeles, Cal. (See Adv. Index Page 178)

Morris & Snow Seed Co. Los Angeles, Cal. Fosgate & Lion Seed Co.

Mountain View, Cal. Ellery, H. E.
Oceanside, Calif.
Lagomarsino & Sons, F.

Sacramento, Cal.

(See Adv. Index Page 178) Laughlin Seed Co. (Onion) Sacramento, Cal.

Ward Seed Co., Wm. A. Sacramento, Cal. (See Adv. Index Page 178)

Bertrand Seed Co. San Francisco, Calif. (See Adv. Index Page 178)

McGill Seed Co., R. C. San Francisco, Cal. (See Adv. Index Page 178)

Morse & Co., C. C. San Francisco, Cal. (See Adv. Index Page 178)

Pacific Seed Growers San Francisco, Calif.

Sherwood Seed Co. San Francisco, Cal.

Braslan Seed Growers Co., Inc. San Jose, Cal. (See Adv. Index Page 178)

California Seed Growers Assn., Inc. San Jose, Calif.

Kimberlin Seed Co. San Jose, Cal.

Johansen-Winslow Seed Co. San Luis Obispo, Cal.

Haven Seed Co. (Tomato)
Santa Ana, Cal.
(See Adv. Index Page 178)

Henry Fish Seed Co. (Beans)
Santa Barbara, Calif.
(See Adv. Index Page 178)

Martin, Harry Stockton, Cal.

Standard Seed Farms Co.
Stockton, Cal.
(See Adv. Index Page 178)

Hogue-Kellogg Co. Ventura, Cal. (See Adv. Index Page 178) CANADA

Hogg & Lytle, Ltd. Toronto, Ont., Canada

Hume & Sons, John Port Hope, Ont., Canada

Morrow Seed Co. (Peas and Beans) Toronto, Ont., Canada (See Adv. Index Page 178)

Steele, Briggs Seed Co., Ltd. Toronto, Canada. (See Adv. Index Page 178)

COLORADO Franklin, A. L. (Onions) Delta, Colo.

Barteldes Seed Co. (Beans) Denver, Colo.

Grand Junction Seed Co. Grand Junction, Colo. (See Adv. Index Page 178)

Balcom Seed Co. (Beans) Greeley, Colo.

La Junta Trading Co., The
La Junta, Colo.
Wiesel Seed Co. (Beans and Vine Seeds)
Pueblo, Colo.

Seed Co. Blotz-Henneman Rocky Ford, Colo. Burrell, D. V. Rocky Ford, Colo.

Ebbert Seed Co.
Rocky Ford, Colo.
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James, R. H.
Rocky Ford, Colo.
Palmer Seed Co.
Rocky Ford, Colo.

Rocky Ford, Colo. Ryan Bros.

Rocky Ford, Colo.

Robinson Seed Co., The J. C.
Rocky Ford, Colo.
(See Adv. Index Page 178)

Gauger, J. E.
Colo.

Swink, Colo.

CONNECTICUT

Woodruff & Sons, F. H. Milford, Conn.
Associated Seed Growers, Inc.
New Haven, Conn.
Woodruff & Sons, S. D.

Woodruff & Sons, S. D.
Orange, Conn.
(See Adv. Index Page 178)
Comstock, Ferre & Co.
Wethersfield, Conn.
(See Adv. Index Page 178)
Hart Seed Co., Chas. C.
Wethersfield, Conn.
(See Adv. Index Page 178)

(See Adv. Index Page 178)

DELAWARE Boggs & Sons, Caleb Cheswold, Del.

FLORIDA

Coxetter, S. V. (Melon) Lloyd, Fla.

Taylor Seedsman, Inc., H. M. (Water melon)

Lloyd, Fla.

Lloyd, Fla.

(See Adv. Index Page 178)
Willie & Son, J. J. (Watermelon)
Lloyd, Fla.
Evans Seed Co.
Monticello, Fla.
Gilbert, D. H. (Watermelon)
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Crookham & Co. Caldwell, Idaho Hodge, G. D. (N. Y. Head Lettuce Seed) Moscow, Idaho

Washburn-Wilson Seed Co. (Peas and Beans)

Moscow, Idaho (See Adv. Index Page 178) Idaho Equity Exchange (Lettuce) Nampa, Idaho

ILLINOIS

Barnard Co., W. W.
Chicago, Ill.
(See Adv. Index Page 178)
Leonard Seed Co.
Chicago, Ill.
(See Adv. Index Page 178)
Rogers Bros. Seed Co. (Peas and Beans)
Chicago. Ill.

Chicago, Ill. (See Adv. Index Page 178)

Vaughan's Seed Store Chicago, Ill.

Condon Bros.

Rockford, Ill.

(See Adv. Index Page 178)

INDIANA

Crabbs Reynolds Taylor Co. Crawfordsville, Ind.

IOWA

Hoopes & Co., J. E. Muscatine, Iowa Sioux City Seed Co. Sioux City, Iowa

KANSAS

Burg, A. H. (Vine Seeds) Lakin, Kan. Barteldes Seed Co. Lawrence, Kan.

MARYLAND

Blamberg Bros.

Baltimore, Md. (See Adv. Index Page 178)

MASSACHUSETTS

Breck & Sons, Joseph Boston, Mass.
Emerson Co., Thos. W.
Boston, Mass.

MICHIGAN

Adrian Seed Growing Co.
Adrian, Mich.
Hall-Stingle Co. (Tomato)
Adrian, Mich.
Lenawee Seed Co.
Blissfield, Mich.

Gebruder Dippe, A. G. Detroit, Mich.

Detroit, Mich.
Ferry & Co., D. M.
Detroit, Mich.
Brown & Son, Inc., A. J. (Peas and Beans)
Grand Rapids, Mich.
Brown Seed Co., Alfred J. (Peas and
Beans)

Beans)

Grand Rapids, Mich. (See Adv. Index Page 178) Isbell Seed Co. Jackson, Mich.

(See Adv. Index Page 178)

MINNESOTA

Northrup, King & Co. Minneapolis, Minn. (See Adv. Index Page 178)

MISSOURI

Corneli Seed Co. St. Louis, Mo.
(See Adv. Index Page 178)
United States Seed Co.
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MONTANA

Gallatin Valley Seed Co. Bozeman, Mont. Western Seed Co., The Hamilton, Mont.

NEBRASKA

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(See Adv. Index Page 178)
Coy & Son, Chauncey P. (Vine)
Waterloo, Neb.
Robinson Seed Co., J. C. (Vine and Corn)

Waterloo, Neb. (See Adv. Index Page 178)

NEW JERSEY

Riverview Farms
Bridgeton, N. J.
Shedaker & Son, B. D.
Burlington, N. J.
Hammell Seed Farms, Geo. Q.

Delanco, N. J.

Pedrick & Son, Geo. R.

Pedricktown, N. J.

(See Adv. Index Page 178)

Hurff, Edgar F.
Swedesboro, N. J.
(See Adv. Index Page 178)
True Type Seed Co.
Woodstown, N. J.

NEW YORK

Rice Seed Co., Jerome B.
Cambridge, N. Y.
(See Adv. Index Page 178)

Allen, Linnaeus
Cutchogue, Long Island, N. Y.
Lupton & Son, J. M.
Mattituck, L. I., N. Y.
(See Front Cover)

Herbst Brothers
New York, N. Y.
(See Adv. Index Page 178)

(See Adv. Index Fage 173)
Madsen & Co., Thos.
New York, N. Y.
Stumpp & Walter Co.
New York, N. Y.
(See Adv. Index Page 178)

Suhr. E.

Suhr. E.

New York, N. Y.

(See Adv. Index Page 178)

Woodruff & Sons, S. D.

New York, N. Y.

(See Adv. Index Page 178)

NORTH DAKOTA Will & Co., Oscar H. Bismarck, N. D.

Holmes Seed Co.
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#### PENNSYLVANIA

Landreth Seed Co., D. Bristol, Pa.

(See Adv. Index Page 178) Garrahan, C. E. (Celery)

Kingston, Pa. Burpee Co., W. Atlee

Philadelphia, Pa.
(See Adv. Index Page 178)
Simon & Son, I. N.
Philadelphia, Pa.

SOUTH CAROLINA Carolina Seed & Plant Co. Florence, S. C.

#### SOUTH DAKOTA

Gurney Seed & Nursery Co. Yankton, S. D

Sullivan, J. G. (Onion Seed)
Asherton, Texas
(See Adv. Index Page 178)
Sherman Magnolia Seed Co.

Dallas Texas
American Seed Co.
Fort Worth, Texas

Filer Seed Co. (Beans and Peas) Salt Lake City, Utah

#### VERMONT

Hawkins, Budd D. Reading, Vt.

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Wood & Sons, T. W. Richmond, Va.

Slate Seed Co. So. Boston, Va.

#### WASHINGTON

Tillinghast Seed Co., The La Conner, Wash. Aabling's Seed Farms, Inc. Mount Vernon, Wash.

Christianson & Co., Alf
Mt. Vernon, Wash.
Lilly Co., Chas. H.
Seattle, Wash.
(See Adv. Index Page 178)

Northwest Seed Co. Seattle, Wash. Inland Seed Co. Spokane, Wash.

Morrison Seed Co. Spokane, Wash.

#### WISCONSIN

Knauf & Tesch Co. (Peas) Chilton, Wis. Rugewski, Seed Co., J. K. Manitowoc, Wis.

Hansche Bros.
Racine, Wis.
Wisconsin Cabbage Seed Co. (Cabbage

Seed)
Racine, Wis.
(See Adv. Index Page 178)

Piper Produce Co. Racine, Wis.
Rasmussen, N. A.
Sommers, Wis.

#### GROWERS FLOWER SEEDS

#### CALIFORNIA

Golden State Seed Co. Coyote, Cal. Rohnert, Waldo (Sweet Peas)

Gliroy, Cal.

(See Adv. Index Page 178)

Waller-Franklin Seed Co.

Guadalupe, Cal.

(See Adv. Index Page 178)

Diener Co., Inc., Richard

Kentfield Cal.

Zvolanek, Ant. C. (Sweet Peas)
Lompoc, Cal.
Aggeler & Musser Seed Co.
Los Angeles, Calif.
(See Adv. Index Page 178)

Los Angeles, Calif.

(See Adv. Index Page 178)

Bodger & Sons Co., John (Asters, Zinnias)
El Monte, Los Angeles County, Calif.

(See Adv. Index Page 178)

Germain Seed & Plant Co.
Los Angeles, Cal.

(See Adv. Index Page 178)

Fosgate & Lion Seed Co.
Mountain View, Calif.

Morse & Co., C. C. (Sweet Pens)
San Francisco, Cal.

(See Adv. Index Page 178)

Schoorl, Adrian J.
San Francisco, Cal.

Braslan Seed Growers Co., Inc.
San Jose, Cal.

(See Adv. Index Page 178)

Johansen Winslow Seed Co.
San Luis Obispo, Cal.

MacDonald Seed Co., The Wm.
Santa Maria, Calif.

(See Adv. Index Page 178)

Hogue-Kellogg Co., The

Ventura, Cal. (See Adv. Index Page 178)

#### CANADA

Steele, Briggs Seed Co., Ltd.

Toronto, Canada

(See Adv. Index Page 178)

Sunset Seed Co., Ltd.

Victoria, B. C., Canada

#### COLORADO

Colorado Seed Co. (Evergreen Tree Seed and Columbines)

and Columbines)
Denver, Colo.
Grand Junction Seed Co. (Zinnias)
Grand Junction. Colo.
(See Adv. Index Page 178)
Burrell, D. V.
Rocky Ford, Colo.

#### FLORIDA

Zangen, O. V. Davenport, Fla.

#### IDAHO

Woodacres, Fred B. Wood Boise, Idaho

#### ILLINOIS

American Bulb Company
Chicago, Ill.
(See Adv. Index Page 178)
Barnard Co., W. W.
Chicago, Ill.
(See Adv. Index Page 178) Vaughan's Seed Store

Chicago, Ill.

#### GROWERS FLOWER SEEDS-Continued

#### MICHIGAN

Gebruder Dippe, A. G. Detroit, Mich.

#### MINNESOTA

Minnetonka Gladiolus Farms R. 3, Hopkins, Minn

#### MISSOURI

Ayres Seed Co., S. Bryson Kansas City, Mo. NEW JERSEY Forbes & Co., Alex Newark, N. J.

#### NEW YORK

Cowee, Arthur
Berlin, N. Y.
John Lewis Childs Seed Co.
Floral Park, L. I., N. Y.
Page Seed Co.
Greene, N. Y.
(See Adv. Index Page

(See Adv. Index Page 178) Herbst Bros.

New York, N. Y.
(See Adv. Index Page 178)
Loechner & Co., Inc.
New York, N. Y.
(See Adv. Index Page 178)

Stumpp & Walter Co.
New York, N. Y.
(See Adv. Index Page 178)

Vaughan's Seed Store New York, N. Y. Vick's Sons, James Rochester, N.

#### NORTH DAKOTA

Will & Co., Oscar H. Bismarck, N. D.

McCullough Seed Co., The J. Chas. Cincinnati, Ohio

Ellis, Mrs. Merton G. (Pansy)

Canby, Ore.
(See Adv. Index Page 178)
Steele's Pansy Gardens (Pansy)
Portland, Ore.

#### PENNSYLVANIA

Landreth Seed Co., D. Bristol, Pa.

Gse Adv. Index Page 178)
Burpee Co., W. Atlee
Philadelphia, Pa.
(See Adv. Index Page 178)

#### SOUTH DAKOTA

Gurney Seed & Nursery Co. Yankton, S. D.

#### TENNESSEE

Snapp & Sons, J. P. Limestone, Tenn.

#### TEXAS

Nicholson Seed Co., Robt. Dallas, Texas

#### VERMONT

Hawkins, Budd D. Reading, Vt.

#### WISCONSIN

Toole, W. A.
Baraboo, Wis.
Rugowski Seed Co., J. K.
Manitowoc, Wis.

#### FOREIGN GARDEN SEEDS

#### AUSTRALIA

Anderson & Co., Ltd., Seedsmen Sydney, N. S. W., Australia Anderson & Co., W. H. Anderson & Co., W. H.
Sydney, Australia
Brunnings, Pty., Ltd., F. H.
Melbourne, Australia
Law, Somner & Co.
Melbourne, Australia
Peterson Bros. & Craig, Ltd.
Brisbane, Queensland, Australia
Railton & Co. Railton & Co.

Melbourne, Australia
Shepherd & Sons, Ltd.
Sydney, Australia
Yates & Co., Arthur
184 Sussex St.
Sydney, N. S. W., Australia

#### CANARY ISLANDS

Alonso, Juan P. Teneriffe, Canary Islands
Dorta, C. Garcia (Onion Seed)
Teneriffe, Canary Islands Varela, Frederico C. Teneriffe, Canary Islands

#### **CZECHOSLOVAKIA**

Bahlsen, Arnost, Panisen, Arnost,
Prague, Czechoslovakia
Grunberger, A. M.
Trebic, Czechoslovakia
Loewenthal Brothers
Brno, Czechoslovakia Schon, Jacob S., Ltd. Brünn, Czechoslovakia Vanek, Heinrich Prague, Czechoslovakia

#### DENMARK

L. Daehnfeldt & Theodor Jensen, Ltd. Odense, Denmark
Danielsen, E., & Larsen, A. S.
Nakskov, Denmark
Dansk Frokultur
Kerteminde, Denmark Dreyer Fr. Aarhus, Denmark Froavl Ostergaardo Horsens, Denmark Frocontorst Kolding, Denmark Frokompagniet, A. S. Maribo, Denmark Hansen, A. (Cauliflower and Cabbage) Kastrup, Amager, Denmark
(See Adv. Index Page 178)
Hartmann & Co., Hjalmar
Copenhagen, Denmark
Helm-Petersen Co., J. C.

Aarhus, Denmark Hoffding, N. F. Copenhagen, Denmark Krogh. A. Odense, Denmark Madsen & Co., Thos. Slagelse, Denmark

Denmark

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Nissen, Fr.
Copenhagen, Denmark
Ohlsen's Enke, J. E.
Linnesgade 14, Copenhagen, De
(See Adv. Index Page 178)
Olsen, Chr. (Cauliflower, Cabbage)
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Copenhagen, Denmark (See Adv. Index Page 178)

#### CHINA

Manshu Nosan Shokai, Inc. Dairen, So. Manchuria, China (See Adv. Index Page 178)

#### ENGLAND

Brown & Co., D. T. Poulton-Le-Fylde, Lancashire, England

Bunting & Co., G. A. (Garden and Flower

Seeds)
London, W. C. I., England
Clucas, Ltd., John L.
Ormskirk, England
Cooper, Taber & Co., Ltd.
London, England Cullen & Sons, Thos Witham, England
Cundy, Chas. & Son
Sudbury, Suffolk, England
Daniels, C. S., & Son

Wymondham, Norfolk, England

Harrison & Sons Leicester, England

Hurst & Son 152 Houndsditch, London, England Johnson & Son., Ltd., W. W. Boston, England Kelway & Son

Kelway & Son
Langport, Somerset, England
(See Adv. Index Page 178)
King & Co., Ltd., E. W.
Coggeshall, Essex, England
(See Adv. Index Page 178)
Nutting & Sons, Ltd.
106 Southwark St., London, England

Pope & Chapman, Ltd. Bishop's Stortford, England

Sharpe & Co., Ltd., Chas. (Peas and Turnip)

Sleaford, England Stuart & Co. London, England

Sutton & Sons
Reading, England
Toogood & Sons, Ltd.
Southampton, England Veitch & Son, Robert

Exeter, England Ward & Co.
Bristol, England
Watkins & Simpson, Ltd.

London, England Yates & Sons

Cheltenham, England

#### FINLAND

Aktiebolaget Agros Helsingfors, Finland

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Aix (Bouches de Rhone), France

Felix Blain,

St. Remyde Provence, France Blanc, Jules

Boret, Victor Saumur, France Chauvet & Bonnet

Le Thor (Vaucluse), France

Clause, L. Bretigny sur orge, Seine et Oise,

Jonequieres (Vaucluse), France

France

Juvisy, Sei Denaiffe & Fils Seine et Oise, France

Carigan (Ardennes), France Desbois, A. Grain sur l'Authion, France

Floriculture Hasslach Avignon, France

Fontaine, Freres
Bourg Achard (Eure), France

Camut & Imbach St. Etienne, Angers, France

Garcin, L. Bernard St. Saturnin-lez-Avignon, Vaucluse, France

Garcin & Mistral
St. Remy de Provence, France
Godineau Graines

Angers, France
Hamonet, A.
Angers, France
Leonard Lille,
Lyon-Villeurbanne, France

Nesse, Paul
St. Remyde Provence, France
Paquet, Jos.
Boulevard Magnan, Nice, France
Picard & Co., A.
Orleans, France

Pucel, Jules Cambrai (Nord), France

Robert & Holder,
Brain sur l'Anthion, France
Robineau & Francois

La Pyrance France Pyramide-Trelaze (M. & L.),

Rolland, Jacques Nimes, France

E. de Rougemont St. Remy-de-Provence, France

Roumanille Freres St. Remy-de-Provence, France Simon Louis Freres & Cie

Bruyeres-le-Chatel (S. & O.), France Tezier, Freres

Paris, France (See Adv. Index Page 178) (See Adv. Index Pag Vieillard, A. Cambrai (Nord), France Vilmorin Andreux & Co. Paris, France

#### GERMANY

Beck & Co., Carl Quedlinburg, Germany Benary, Ernest (Garden and Flower Seeds) Erfurt, Germany

(See Adv. Index Page 178) Bitterhoffsohn, August

Berlin, Germany

Buchner, A. G., Rudolf (Garden and Flower

Erfurt, Germany
Buchner, A. G., Rudolf (Sugar Beet and
Mangel)
Erfurt Communication

Erfurt, Germany

Carl, Franz Quedlinburg, Germany Deuber, Jr., Joh. Nachf. Bamberg, Germany

Frapp, Leonhard
Krodpa in Thuringen, Germany
Gebruder Dippe, A. G.
Quedlinburg, Germany

Grashoff, Martin Quedlinburg, Germany

Haage, Franz Anton Erfurt, Germany

Haage & Schmidt Erfurt, Germany

Haubner, August Eisleben, Germany

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Mann, Otto Leipsig-Eutritzsch, Germany

Martin, Franz Erfurt, Germany Mette, Heinr

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Altanweddingen, Germany
Noth. Johs, Jr.
Fischbach (Gotha), Germany

Karl Pabst,

Paost, Kail Erfurt, Germany Philipp & Co., H. O. Hamburg, Germany Robra, Carl Aschersleben, Germany

Rosenfelder, Oskar Bamberg, Germany Sachs, David

Quedlinburg, Germany

Schmidt, J. C.
Erfurt. Germany
Terra, A. G.
Ascherslehen, Germany Trapp, Leonhard Krolpa in Thuringen, Germany

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Delft, Holland
Remeeus & Van Der Giessen, Ltd.
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Rood & Zoon, P.
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Schilpsand & Zoon, P. J.
Hillegom, Holland
Sluis Abraham

Sluis, Abraham
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Sluis Bros., Ltd.
Enkhuizen, Holland

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Spruijt & Co. Utrecht, Holland Corn. Van Beusekom Arnhem, Holland

Arnhem, Holland
Van den Berg Bros.
Naaldwyk, Holland
Van Der Veld, George
Lisse, Holland
Van Namen Bros.
Zwijndrecht, Holland
Van Waveren & Herzog, Ltd.
Hillegom, Holland
Wijs & Zoon, J. B.
Amsterdam. Holland
Zwaan & De Wiljes, Inc.
Scheemda, Holland
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#### HUNGARY

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Budapest, Hungary Kertesz, Ludwig

Budapest, Hungary
Mauthner, Ltd., Edmund
Budapest, Hungary
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"Terra" A. G.

Budapest, Hungary

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Torre Del Greco (Near Naples), Italy
Ingegnoli Fratelli
Milan and Rome, Italy
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Scarpere (Padaya) Italy

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Tokio, Japan
Sapporo Seed Farm
Sapporo, Japan
Yamato Seed & Imp. Co.
Mejiro, Tokio, Japan

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Wellington, New Zealand
Nimmo & Blair
Dunedin, New Zealand
Yates & Co., Ltd., Arthur
Auckland, New Zealand

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Kristiania, Norway Indal Hamar, Norway Michelet, A.
Kristiania, Norway
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Stavanger, Norway
Sandnes & Planteskole
Sandnes (Jaeren), Norway

#### POLAND

Buszczynski & Sons K. Warsaw, Poland

#### PORTO RICO

Rubio, Ernesto Arecibo, P. R. (See Adv. Index Page 178)

#### RUSSIA

Amtorg Trading Corp. Moscow, Russia (See Adv. Index Page 178)

SCOTLAND Bell, Ltd., David Leith, Scotland

Cross Seed Co., Ltd., Alexa Glasgow, Scotland Lawson & Son, Ltd., Peter Edinburgh, Scotland Alexander

#### SWEDEN

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Svalof, Sweden
Engstrom, Aktiebolaget Carl
Eslof, Sweden
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Alsike clover " hybridumBastardkleeTrèfle hybride
White clover " repens Wiessklee Trèfle blanc
Crimson clover " incarnatum.InkarnatkleeTrèfle incarnat
Biennial white sweet cloverMelilotus albaweiser SteinkleeTrèfle de Bokhara
Lespedeza
Bur cloverMedicago arabicarauher Schneckenklee.Minette punaie
AlfalfaLuzerneLuzerne
TimothyPhleum pratenseTimothygrass; Wie-
senlieschgrasFlèole des prés
Agrostis alba or
RedtopAgrostis palustrisFioringrasAgrostide tracant
Orchard grassDactylis glomerataKnaulgrasDactyle pelotonné
Kentucky bluegrassPoa pratensisWiesenrispengrasPaturin des prés
Bermuda grassCynodon dactylonechter HundszahnHerbe des Bermudes
Brome grassBromus inermisgrannenlose TrespeBrome de Hongrie
Meadow FescueFestuca elatiorWiesenschwingelFêtuque des prés
Italian rye grassLolium multiflorumitalienisches RaigrasRaygrass d' Italie
Perennial rye grass. Lolium perenneenglisches Raigras;
DauerlolchRaygrass anglais Hairy vetchVicia villosazottige Wicke;
SandwickeVesce velu
Spring vetchVicia sativaSaatwickeVesce de printemps
Common milletChaetochloa italicaEchtehirseMillet blanc rond ordinaire
German millet
Japanese milletEchinochloa
frumentaceaHuhnerhirseMillet du Japan
Broomcorn milletPanicum miliaceumRispenhirseMillet commun
Sorghums (Grain) Holcus sorghum*MohrenhirseSorgho
Sorghums (Sweet)Holcus sorghumZuckermohrhirseSorgho sucré
Johnson grassHolcus halepenseAleppo-Mohrenhirse .Sorgho d' Alep.
RapeBrassica napusRapsColza
Wheat
CornZea maysMaisMais
Barley
Oats
Rye Secale cereale Roggen Seigle  Flax Linum usitatissimum. Leinsaat Javard
BuckwheatFagopyrum esculentumBuchweizenBlé noir
Cotton
Canada field peaPisum arvenseFelderbse; SaaterbsePois des champs
Canada field pea

<sup>\*</sup>Other Latin names are Sorghum sorghum and Andropogon sorghum. Holcus sorghum is the name accepted by the Division of Botany, U. S. Department of Agriculture.



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American Rose & Plant Co.
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Barnard Co., The W. W. Chicago, 111.

(See Adv. Index Page 178)

Barteldes Seed Co. Lawrence, Kans.

Bodger & Sons Co., John
El Monte, Los Angeles County, Calif.
(See Adv. Index Page 178)
Bolgiano Seed Co., J.
Baltimore, Md.

Bolgiano & Co., F. W. Washington, D. C. Bonnewitz Wholesale Gardens Van Wert, Ohio

Brown Bulb Ranch

Capitola, Cal. Bruce & Co., Ltd., John A.

Hamilton, Canada

(See Adv. Index Page 178)
Buchanan Seed Company R P
Memphis, Tenn.

Bulst Co., Robert
Philadelphia, P1.
(See Adv. Index Page 178)
Burpee & Co., W. Atice
Philadelphia, Pa.
(See Adv. Index Page 178)

Bushy Flower Gardens Wake, Va.

Wake, va.
Childs Seed Co., John Lewis
Floral Park, L. I., N. Y.
Clarke & Son, W. B.
San Jose, Calif.
Corneli Seed Co.
St. Louis, Mo.
(See Adv. Index Page 178)

Croom & Bro., John F.
Magnolia, N. C.
Cumberland Valley Nurserv Co.. Inc.
McMinnville, Tenn.

Diener, Richard

Kentfield, Cal.

Enid Floral Co. Enid, Okla.

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Newark, N. J.

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Dalton, N. Y.
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Morocco, Ind.

Gill Bros. Seed Co. (Dahlia) Portland, Ore.

Goodhold Floral Gardens

Goodnoid Floral Gardens
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Grootendorst, A. M.
Benton Harbor, Mich.
Henderson & Co., Peter
New York City, N. Y.
(See Adv. Index Page 178)
Holland-American Seed Co.
Grand Banids Mich.

Grand Rapids, Mich. Holst-Knudsen, S. New York, N. Y. Humphrey, John B.

Petaskala, Ohio

Hunter, S. B.

Magnolia, N. C.

Hyde Co., H. A.

Watsonville, Calif.

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Sugarland, Texas
Indiana Dahlia Farms
New Albany, Indiana
Ireland, Z. Jay
Pleasant Valley, N. Y.
(See Adv. Index Page 178)
Kunderd, A. E. (Gladiola)
Goshen, Ind.
Lawler, George

Lawler, George

Gardenville, Tacoma, Wash. (See Adv. Index Page 178) Leonard Seed Co.

Chicago, Ill.

(See Adv. Index Page 178)

Long, J. D.
Boulder, Colo.
Long, W. P.
West Grove, Pa.

West Grove, Pa.
McCullough's Sons Co., J. M.
Cincinnati, Ohio
(See Adv. Index Page 178)
McHutchison & Co.
New York, N. Y.
(See Adv. Index Page 178)
Main, Arthur B.
Santa Cruz. Calif.

Santa Cruz, Calif.

Market Gardeners Seed Co.

Market Gardeners Seed Co.
Cincinnati, Ohio
(See Adv. Index Page 178)
Meyer Seed Company
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Minnetonka Gladiolus Farms
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Morris & Snow Seed Co.
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Davenport, Fla.
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New York City, N. Y.
Schell, Inc., Walter S.
Harrisburg, Pa.
(See Adv. Index Page 178)
Schling Seedsmen, Inc., Max
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Schoorl, Adrian J.
San Francisco, Calif.

Schwake & Co., Inc., Chas. New York, N. Y.

Scott Co., I. W. Pittsburgh, Pa.

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State Nursery & Seed Co.
Helena, Mont.
Stumpp & Walter Co.
New York City, N. Y.
(See Adv. Index Page 178)
Swedberg Bros. Nurseries
Battle Lake, Minn.
Templin-Bradley Co.
Cleveland, Ohio
United Bulb Growers, Inc.
New York City, N. Y.
Van Antwerp's Seed Store

Van Antwerp's Seed Store Mobile, Ala.

(See Adv. Index Page 178)





## Good Money for Every Seedsman

Who Will Catalog Chinese Cinnamon Vines

Immense quantities sold and sales increase each year. Cinnamon Vines paying; they are sure to grow and sure to please and make friends. The tubers are nice and clean to handle, never rot, are easy to mail, require no packing and you can deliver them by mail, express or over your counters from November until June, Also a limited quantity of madeira vine tubers. Try them and be convinced. Electros supplied. Trade list and particulars free. Yours for more business.

#### Z. JAY IRELAND

Successor to A. T. Cook

Pleasant Valley New York

# Unusual Varieties in Seeds

The nature of our business is such that we are frequently in a position to offer in addition to best strains of standard varieties of seeds:

Rarely Called-for Vegetables Choice Imported Flower Seed The Lesser-used Grasses

Stumpp & Walter C

30-32 Barclay St., New York

#### BULBS, PLANTS AND MISCELLANEOUS SEEDS-Continued

Van Zonneveld Bros. & Philippo New York City, N. Y. Vaughan's Seed Store

Chicago, Ill.
Vick's Sons, James
Rochester, N. Y.
Vos & Son, P.
Grand Rapids, M
Weller Nurseries Co.

Mich.

Weller Nurseries Co.
Holland, Mich.
White Seed Co., Buxton
Elizabeth City, N. C.
Younkerman Seed Co.
Council Bluffs, Iowa
Zangen, O. V.
Davenport, Fla.

#### BULBS-FOREIGN DEALERS

FRANCE

Blain, Felix St. Remy de Provence, France Rynveld & Cie Ollioules, Var, France

GERMANY

Berham, Chr.
Stendal, Germany
Bernary, Ernst
Erfurt, Germany

Chehler, Carl Halberstadt, Germany

Haiderstadt, Germany
Haage & Schmidt
Erfurt, Germany
Heinemann, F. C.
Erfurt, Germany
Hesse & Sohn, Rob.
Rieder am Hacz, Germany

Rieder am Hacz, G Kaiser, Ferdinand Eisleben, Germany Klisning Sohn, C. L. Barth, Germany Leib, Wilhelm Arnstadt, Germany Lieban & Co. Erfurt, Germany Lorenz, Chr. Erfurt, Germany Pabst, Carl

Pabst, Carl Frfurt, Germany Pape & Bergmann Quedlinberg, Germany Pfilzer, Wilhelm Stuttgart, Germany

Putz, Otto Erfurt, Germany

Reine, Schoo & Co. Fornosch-Holstein, Germany

Roemer, Friedrich Quedlinberg, Germany Schraeder, C. G. Saltwedel, Germany Stenger & Rotter Erfurt, Germany

Wehranpfannig, A.
Quedlinberg, Germany
Wiegelt & Co.
Erfurt, Germany

#### HOLLAND

HOLLAND
Byvoet Bros.
Overeen, Haarlem, Holland
De Graaf Bros.
Noordwyk, Holland
De Graaf & Sons, H.
Lisse, Holland
Eldering & Son, W. J.
Overeen, Holland
Grullemans & Sons, J. J.
Lisse, Holland
Jonkheer & Sons, C.
Hillegom, Holland
Segers Brothers
Lisse, Holland
Segers, Gerrit
Lisse, Holland
Steelman & Sons, C. J.
Sassenheim, Holland

Tegelaar Bros.

Lisse, Holland Van Der Schoot, R. A Hillegom, Holland Van Der Veld, George Lisse, Holland

Van Waveren Stamhois Nurseries Hillegom, Holland

#### **JAPAN**

Bunting & Co., Isaac Yekohama, Japan Sakata & Co., T. Yokohama, Japan

#### SWEDEN

Algot Holmberg & Sen Norrkoping, Sweden

#### NURSERY STOCK

Allen Nurseries Seaford. Del.

Seaford, Del.
Bohlender Sons, Peter
Tippecanoe City, Ohio
Campbell, F. W. (Ornamentals)
Detroit, Mich.
Clark, John H. (Ornamentals)
Chariton, Iowa
Clinton Falls Seed & Nursery Co.
Owatonna. Minn.

Owatonna, Minn. Crawford Gardens (Peonies, Irises and Perennials)

La Porte, Ind. Cutler & Downing Co. Benton Harbor, Mich.

Ernst Nurseries Eaton, Ohio

Eaton, Ohio
Forest Nursery Co.
McMinnville, Tenn.
Gardens of the Blue Ridge
Ashford, McDowell Co., No. Carolina
Harmel Peony Co.
Berlin, Md.
Harrison Nursery Co.
York, Nebr.
Hill Nursery, D., The
Dundee, Ill.
Naperville Nurseries
Yanerville. Ill.

Dundee, Ill.

Naperville Nurseries
Naperville, Ill.
(See Adv. Index Page 178)

North-Eastern Forestry Co., The
Cheshire, Conn.

Northfield Seed & Nursery Co.
Northfield, Minn.

Piedment Forestry Co.
Bound Brook, N. J.
Smith Co., W. & T.
Geneva, N. Y.
Sonderegger Nurseries & Seed House
Beatrice, Nebr.
State Nursery & Seed Co.
Helena, Mont.
Storrs & Harrison Co.
Painesville, Ohio
Thomas, W. W.
Anna, Ill.
Weaver Gardens Co., The
Wichita, Kans.
Westminster Nurseries, The
Westminster, Md.
Willadean Nurseries, Inc.
Sparta, Ky.

Sparta, Ky.

#### CACTI

Texas Cacti Co., El Paso, Texas

#### EVERGREENS

Conwell, Inc., H. Ernest Milton, Dela. Cumberland Valley Nursery Co., Inc. McMinnville, Tenn.



## **CENTRAL LOCATION**

We Offer the Best of Service Trees, Evergreens, Shrubs Vines and Perennials Rock Garden Plants

300 Acres Devoted to Growing of First Class Ornamental Nursery Stock

VISITORS ARE WELCOME

Telephone Naperville One

## NAPERVILLE NURSERIES

NAPERVILLE, DU PAGE COUNTY, ILLINOIS ESTABLISHED IN 1866

#### BULBS, PLANTS AND MISCELLANEOUS SEEDS-Continued

**EVERGREENS—Continued** 

Naperville Nurseries

Naperville, Ill.
(See Adv. Index Page 178)
North-Eastern Forestry Co.
Cheshire, Conn.
Rosebank Nursery Co.
Husterille, Ale

Rosebank Nursery Co.
Huntsville, Ala.
Schmieske, Wm. F.
Binghamton, N. Y.
State Nursery & Seed Co.
Helena, Mont.
Swedberg Bros. Nurseries
Battle Lake, Minn.

#### FERNS

Ferndale Nursery Askov, Minn.

#### FRUIT TREES

Cumberland Valley Nursery Co., Inc. McMinnville. Tenn.

Cumberland Valley Nurse McMinnville, Tenn. Lake View Nurseries Rochester, N. Y. May Seed & Nursery Co. Shenandoah, Iowa Munson Nurseries Denison, Texas Potter Sales Nursery Co. McMinnville, Tenn.

Rosebank Nursery Co. Huntsville, Ala. Smithville Nursery Co. Smithville, Tenn.

#### FRUIT—SMALL

Cumberland Valley Nursery Co., Inc. McMinnville, Tenn. Schifferli & Son Nurseries, The F. E. Fredonia, N. Y.

#### GRAFTING WAX

Clark & Son, Walter E.
Milford, Conn.
(See Adv. Index Page 178)

#### GRAPE VINES

Munson Nurseries Denison, Texas

#### ORNAMENTALS

Brainard's Nurseries & Greenhouses, Inc. Des Moines, Iowa Cumberland Valley Nursery Co., Inc. McMinnville, Tenn.

Naperville Nurseries

Naperville, Ill.

(See Adv. Index Page 178)

#### PERENNIALS

Locust Valley Dahlia Farms Locust Valley, L. I., N. Y. Naperville Nurseries

Naperville, Ill.

(See Adv. Index Page 178)

#### ROSE BUSHES

Howard Rose Co., Inc. Hemet, Calif.
(See Adv. Index Page 178)

#### WATER PLANTS

Terrell's Aquatic Farm Oshkosh, Wis.

#### ONION SETS

Algers, K. W.
Crystal City, Tanderson, Wm. B.

Norwood Park, Chicago, Ill.
Barnard Co., The W. W.
Chicago, Ill.
(See Adv. Index Page 178)

Blamberg Bros., Inc.
Baltimore, Md.
(See Adv. Index Page 178)

Bolgiano Seed Co., The J.
Baltimore, Md.
Bruce & Co., Ltd., John A.
Hamilton, Ont., Canada
(See Adv. Index Page 178)

Buist Co., Robert Philadelphia, Pa.

Ches More Page 178)
Chesmore Seed Co.
St. Joseph, Mo.
Chester & Co., H. H.
Chicago, Ill.
Comstock Ferre & Co.
Wethersfield, Conn.
(See Adv. Index Page 178)

Condon Bros. Seedsmen

Rockford, Ill. (See Adv. Index Page 178)

Corneli Seed Co.
St. Louis, Mo.
(See Adv. Index Page 178)
Davenport Seed Co.
Davenport, Iowa

Grand Junction Seed Co. Grand Junction, Colo

Grand Junction Colo.

Grand Junction Colo.

Gridley Maxon Co.
Chicago, Ill.
Hafendorfer, G. J.
Greeley, Colo.
Hall Seed Co.
Louisville. Ky.
(See Adv. Index Page 178)
Harden, Hamilton & Lewman
Louisville, Ky.
Hart Seed Co., Chas. C.
Wethersfield, Conn.
(See Adv. Index Page 178)
Hayes Labish Farms
Salem, Oregon

Salem, Oregon Hollenbach, Peter

Hollenbach, Peter
Chicago, Ill.
(See Adv. Index Page 178)
Hunkel Co., G. H.
Milwaukee, Wis.
Johnson, Inc., J. Oliver
Chicago, Ill.
Kaufmann's Onion Set Warehouse
South Holland Ill

South Holland, Ill. Landreth Seed Co., D. Bristol, Pa.

(See Adv. Index Page 178)

Leonard Seed Co.
Chicago, Ill.
(See Adv. Index Page 178)
Louisville Seed Co.
Louisville, Ky.
Mangelsdorf Seed Co.
Action Kan

Atchison, Kan.

Manitowoc, Seed Co.

Manitowoc, Wis.

Meeter & Son. John

Lansing, Ill. Nebraska Seed Co. Omaha, Neb.

Northrup, King & Co.
Minneapolis, Minn.
(See Adv. Index Page 178)
Ohio Valley Seed Co.
Evansville, Ind.
Owensboro Plant & Seed Co.
Owensboro, Ky.

Owensboro, Ky.
Page Seed Co.
Greene, N. Y.
(See Adv. Index Page 178)
Peerbolte Co., Peter
South Holland, Ill.
Portland Seed Co.
Portland, Ore.
Quincy Seed Co.
Quincy, Ill.
Rau, Lawrence
Chicago, Ill.
Rubio. Ernesto

Rubio, Ernesto Arecibo, Porto Rico (See Adv. Index Page 178)

# TROWBRIDGE GRAFTING WAX

"OLDEST and BEST"

Used by Nurserymen and Best Horticulturists from Coast to Coast for over 60 years. An easy seller.

Ask us about the new elastic paraffin wax, "Parapin Wax." It protects orchard trees against attacks by mice and borers. Can graft in hottest climates by this new method.

Get our Price on Melting Pots

WALTER E. CLARK & SON

Milford

Connecticut



## ROSE BUSHES

DORMANT FIELD-GROWN MAIL ORDER SIZES

1½ Grade Hybrid Teas 14 to 18 Inches, 2 Branches

WRITE FOR LIST, ALSO Showing Full Assortment No. 1 Grade Winter Harvest

HOWARD ROSE CO.

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CALIFORNIA

# ONION S E T S

When in the market for choice sets be sure that you write or wire us.

BERMUDAS & PEARLS for Fall 1929

## PETER HOLLENBACH SEEDS

808 W. Lake Street CHICAGO

# SEEDS ONION SETS

Seed farms located in various States. We produce all standard varieties and specialties for the WHOLESALE TRADE.

Established in 1865

Correspondence solicited on both spot and future Garden Seeds

S. D. WOODRUFF & SONS

ORANGE

CONNECTICUT

#### BULBS, PLANTS AND MISCELLANEOUS SEEDS-Continued

ONION SETS-Continued

Reeve, Geo. Chicago, Ill.

Schilder Bros. Chillicothe, Ohio

Schilder Bros.
Chillicothe, Ohio
Sherman-Magnolia Seed Co.
Dallas, Texas
Snapp & Sons, J. P.
Limestone, Tenn.
Spokane Seed Co.
Spokane, Wash.
Standard Seed Co.
Kansas City, Mo.
Steele, Briggs Seed Co.
Toronto, Canada
(See Adv. Index Page 178)
Sullivan, J. G.
Asherton, Tex.
(See Adv. Index Page 178)
Van Antwerp's Seed Store
Mobile, Ala.
(See Adv. Index Page 178)
Van Duersen Bros.
Riverdale, Ill.
Vaughan's Seed Store
Chicago, Ill.
Waterman, Chas.
So. Holland, Ill.
Wetsel Seed Co.
Harrisonburg, Va.
White & Sons, D. A.
Salem, Ore.
Wood, Stubbs & Co.
Louisville, Ky.
Woodruff & Co., F. H.
Milford, Conn.
Woodruff & Sons, S. D.
Orange, Conn.
(See Adv. Index Page 178)
Woodruff & Sons, S. D.

Voodruff & Sons, S. D.
New York, N. Y.
Younkerman Seed Co.
Council Bluffs, Iowa

PLANTS-FLOWER

Alexander, J. K. Bridgewater Mass. Allen Nurseries

Seaford, Del.
American Bulb Company

Chicago, III. (See Adv. Index Page 178)

(See Adv. Index Page American Rose & Plant Co. Springfield, Ohio Brazil Dahlia Farm Brazil, Ind. Bushy Flower Gardens Bushy, Va. Chautauqua Flower Fields Bemis Point, N. Y. Childs Seed Co., John Lewis Floral Park, L. I., N. Y. Cook Seed Co. Waterford, N. Y. Diener Co., Inc., Richard

Cook Seed Co.
Waterford, N. Y.
Diener Co., Inc., Richard
Kentfield, Calif.
Perry Seed Co.
Boston, Mass.
Hardy Plant & Pansy Farm
Baraboo, Wis.
Hyde Co., H. A.
Watsonville, Calif.
Ireland, Z. Jay
Pleasant Valley, N. Y.
(See Adv. Index Page 178)
Lind Plant Farms
Cotulla, Texas
Long Island Dahlia Gardens
Hicksville, L. I., N. Y.
McGregor Bros. Co.
Springfield, Ohio
McHutchison & Co.
New York, N. Y.
(See Adv. Index Page 178)
Merritt, John W.
Farmingdale, L. I., N. Y.
Myers & Scott
Van Buren, Ark.

Onarga Nursery Co. Onarga, Ill.
Portland Seed Co.
Portland, Ore.
Rosebank Nursery

Rosebank Nursery Co.
Huntsville, Ala.
Roudabush & Co., W. 1
Wilmington, N. C.
Schaumberg, Henry
Hammonton, N. J.
Schmeiske, Wm. F.
Binghamton, N. Y.
Skidelsky & Co., S. S.

N. S. S. N. Y. C.

Binghamton, N. Y.
Skidelsky & Co., S. S.
New York City, N. Y.
Smith Plant Farm, E. C.
Milano, Texas
State Nursery & Seed Co.
Helena, Mont.
Texas Seed & Plant Co.
Dallas, Texas
Vick's Sons, James
Rochester, N. Y.
Weller Nurseries Co.
Holland, Mich.

Holland, Mich

#### VEGETABLE PLANTS

Albany Plant & Seed Co.

Albany Plant & Seed Co.
Albany. Ga.
Alger, K. W. (Grower)
Crystal City, Texas
Alvy, Jack
Van Buren, Ark.
Amzi Godden Seed & Grain Co., Inc.
Birmingham, Ala.
Blackshear Plant Co.
Blackshear, Ga.
Bolglano & Co., F. W.
Washington, D. C.
Bruce Wholesale Plant Co.
Waldosta, Ga.
Carolina Seed & Plant Co.
Florence, S. C.
Clifton, J. A.

Florence, Clifton, J. A. Russellville, Ark. Councill Co., J. P. Franklin, Va. Councill Seed Co. Franklin, Va.

Franklin. Va.
Perry Seed Co.
Boston, Mass.
Fulwood, P. D.
Tifton, Ga.
Geraty & Co., Wm. C.
Yonges Island, S. C

Grand Junction Seed Co.
Grand Junction, Colo.
(See Adv. Index Page 178)

Grossmann & Son, W. Petersburg, Va.

Petersburg, Va.
Hammell Seed Farms, Geo. Q.
Delanco, N. J.
Harvey Seed Co.

Montgomery,

Hollywood Farms
Pavo. Ga.
Hoopes Co., J. E. (Plants and Asparagus
Roots)

Roots)
Muscatine, Iowa
Jefferson Farms, The
Albany, Ga.
Jouannet, Alfred
Mt. Pleasant, S. C.
Kille, Willard B.
Swedesboro, N. J.
Ledden & Son, Orol
Sewell, N. J.
Lehmann's Seed Store
Baton Rouge, La.
Leonard. I. & J. L.

Leonard, I. & J. L.
Iona, N. J.
Lind Plant Farm
Cotulla, Texas
May & Son, Inc., W. H.
Alexandria, Va.

Mixson Seed Co., W. Charleston, S. C.

## **Additional Profits**

— for the Dealer

### Satisfaction

— for the Customer

## WITH DIAMOND GARDEN HOSE



Wrapped in handy packages of 25-foot and 50-foot lengths, coupled ready for use.

#### Because:

- 1. It is made of first-class materials throughout; tough rubber, strong cotton braids, water-cured under high pressure.
- It will stand all sorts of wear and give satisfactory service for many seasons.
- You can put in a stock with a small investment. Only one size is necessary—5/8".
- 4. Each package carries its own advertising, and when displayed is practically self-selling.
- 5. Free advertising helps are furnished with the hose—electros, blotters, postcards, letterheads, telephone slips, etc.

## DO NOT OVERLOOK THIS OPPORTUNITY TO ADD TO YOUR 1929 PROFITS

Write our nearest Branch for full information and prices

## THE DIAMOND RUBBER COMPANY, Inc.

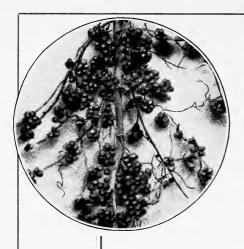
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Akron, Ohio

Atlanta Chicago Boston Dallas Kansas City Los Angeles New York Seattle Philadelphia San Francisco

# Diamond

**GARDEN HOSE** 



# It will pay you well

to display and sell

# Mulford Cultures

Every sale of legume seeds should include Mulford Cultures. They make satisfied customers and repeat orders, not only for cultures but for seeds as well.



Mulford Cultures are prepared and tested in the world's largest Biological Laboratories, with the utmost scientific care and skill. Ecnomical and easy to use. The sealed bottle insures purity.

Mulford Cultures offer additional inducements for a listing in your catalogue. Display them and increase your returns on this profitable essential.

Selling helps include advertising cuts and imprinted, descriptive folders for your mailing list. Your request brings them.

Increase Your Sales—Increase Your Profits—
Increase Your Satisfied Customers

#### H. K. MULFORD COMPANY

PHILADELPHIA, U. S. A.

#### BULBS, PLANTS AND MISCELLANEOUS SEEDS-Continued

#### VEGETABLE PLANTS-Continued

Wegetable Plant Co.
Tifton, Ga.
Old Dominion Plant Co.
Franklin, Va.
Omega Plant Co.
Omega, Ga.
Owensboro, Ky.
Ozark Seed & Plant Co.
Nashville, Ark.
Capital Fuel & Feed Co.
Phoenix, Ariz.
Piedmont Plant Co.
Albany, Ga.
Riverview Farms
Bridgeton, N. J.
Rochelle, Paul F.
Morristown, N. J.
Ross Bros. Seed Co.
Wichita, Kan.
Roudabush & Co., W. P.
Wilmington, N. C.
Schroer Plant Co.
Valdosta. Ga.

Wilmington, N.
Schroer Plant Co.
Valdosta, Ga.
Stevenson, G. W.
Fordyce, Ark.
Stockton Seed Co.
Stockton, Cal.
Tidewater Plant Co.
Franklin, Va.
Tingle, Leamon G.
Pittsville, Md.
Todd. Geo. M.

Todd, Geo. M.

Todd, Geo. M.
Greensboro, N. C.
Van Antwerp's Seed Store
Mobile, Ala.
(See Adv. Index Page 178)
Vick's Sons, James
Rochester, N. Y.
Wards Gardens
Mobile, Ala.
Williams, W. W.
Quitman, Georgia
Wood & Son, T. W.
Richmond, Va.
Ryatt & Sons Co., Job P.
Raleigh, N. C.
Zeplitz, Rolf
Lima, Ohio

Lima, Ohio

## SEEDS-MISCELLANEOUS

#### CANARY SEED

CANARY SEED

Blamberg Bros.
 Baltimore, Md.
 (See Adv. Index Page 178)

Cornell Seed Co.
 St. Louis, Mo.
 (See Adv. Index Page 178)

Crawford, Keen & Co.
 New York City, N. Y.

Curtin Company, George L.
 New York, N. Y.

Dickinson Co., Albert
 Chicago, Ill.

German, Gale T.
 New York, N. Y.

Herbst Bros.

Herbst Bros.

New York City, N. Y.

(See Adv. Index Page 178)

Hinton & Co., Inc.,
New York, N. Y.

Johnson, Inc., J. Oliver
Chicago, Ill.

Justrite Co., The
Milwaukee, Wis.

Kaufman's Onion Set Warehouse

Kaufmann's Onion Set Warehouse South Holland, Ill. Kellogg-Kelly Seed Co. St. Joseph, Mo.

Magnesia Products Co.
Milwaukee, Wis.
McCullough Seed Co., The J. Chas. McCullough Seed Co., The J. Chas. Cincinnati, Ohio
Nungesser-Dickinson Seed Co.
New York, N. Y.
Philadelphia Seed Co.
Philadelphia, Pa.
(See Adv. Index Page 178)
Radwaner Seed Co., I. L.
New York, N. Y.
(See Adv. Index Page 178)
Scarlett & Co., Wm. G.
Baltimore, Md.
Standard Seed Co.

Standard Seed Co. Kansas City, Me Von Damm, F. A. Brooklyn, N. Y.

LAWN GRASS SEED

American Seed Co. Detroit, Mich. Barnard Co., W. Chicago, Ill.

(See Adv. Index Page 178) Grass Co.

Hoopeston, Ill.

Bernham, Inc. New York, N. Y. Brady's Nursery White Bear Lake, Minn.

White Bear Lake, Minn.
Corneli Seed Co.
St. Louis, Mo.
(See Adv. Index Page 178)
Craver-Dickinson Seed Co.
Buffalo, N. Y.
Dickinson Co., Albert
Chicago, Ill.
Doughten Seed Co.
Jersey City, N. J.
Holst-Knudsen, S.
New York, N. Y.
Hunkel Co., G. H.
Milwaukee, Wis.
Johnson, Inc., J. Oliver
Chicago, Ill.
Kellogg-Kelly Seed Co.
St. Joseph, Mo.
Leonard Seed Co.
Chiengo, Ill.
(See Adv. Index Page 178)

Leonard Seed Co.
Chicago, Ill.
(See Adv. Index Page 178)
Louisville Seed Co.
Louisville, Ky.
McCullough Seed Co., The J. Chas.
Cincinnati, Ohio
Nungesser-Dickinson Seed Co.
New York City, N. Y.
O. & M. Seed Co., The
Green Springs, Ohio
(See Adv. Index Page 178)
Philadelphia Seed Co.
Philadelphia, Pa.
(See Adv. Index Page 178)
Scarlett & Co., Wm. G.
Baltimore, Md.
Scott Co., I. W.
Pittsburgh, Pa.
Seaboard Seed Co.
Philadelphia, Pa.
(See Adv. Index Page 178)
Sevin-Vincent Seed Co.
San Francisco, Calif.
Steinhardter & Nordlinger
New York, N. Y.
Templin-Bradley Co.
Cleveland, Ohio
Williamson, Garfield
New York City, N. Y.

New York City, N. Y.

POP CORN

American Popcorn Co.
Sioux City, Iowa
Dickinson Co., Albert
Chicago, Ill.
Corneli Seed Co.
St. Louis, Mo.
(See Adv. Index Page 178).
Tuttle Popcorn Co., R. M.
Spencer, Iowa

Spencer, Iowa

#### BULBS, PLANTS AND MISCELLANEOUS SEEDS-Continued

#### POTATO SEED

Interstate Seed & Grain Co. Fargo, N. D.
(See Adv. Index Page 178)

#### SEED POTATOES

Barnes Co., O. J.
Grand Forks, N. D.
Cochrane Seed Co., T. H.
Portage, Wis.
Davenport Seed Co.
Davenport, Iowa Davenport, Iowa
Hickox-Rumsey Co.
Batavia, N. Y.
Hunkel Co., G. H.
Milwaukee, Wis.
Hyde Co., H. A.
Watsonville, Calif.
Interstate Seed & Grain Co.
Fargo, N. D.

Farge, N. D.

Mahaffey Co., The Chicago, Ill.
May & Co., Inc., W. H.
Alexandria, Va.
Miller & Co., Albert
Chicago, Ill.
(See Adv. Index Page 178)

Chicago, III.

(See Adv. Index Page 178)

Myers & Scott

Van Buren, Ark.

Owensboro Seed & Plant Co.

Owensboro, Ky.

Philadelphia Seed Co.

Philadelphia, Pa. (See Adv. Index Page 178)

(See Adv. Indee Pinner & Co. Suffolk, Va. Portland Seed Co. Portland, Ore. Scarlett & Co., Wm. G. Baltimore, Md. Simmons Seed Co. Moorhead, Minn. Valker-Christensen Co.

Valker-Christensen Co. Minot, N. Dak. Van Antwerp's Seed Store

Mobile, Ala.
(See Adv. Index Page 178)
Washburn-Wilson Seed Co.

Washourn-Wison Seed Co.

Moscow, Idaho
(See Adv. Index Page 178)
Woodruff & Sons, S. D.
New York, N. Y.
Woodruff & Sons, S. D.
Orange, Conn.
(See Adv. Index Page 178)

(See Adv. Index Page 178)

#### SEED CORN

Atlantic Seed Co., Inc.
Philadelphia, Pa.
Bernhard Seed Co., A.
Parkston, S. D.
Bomberger Seed Co.
Modesto, Calif.
Bowman Seed Co., The
Concordia, Kan.

Concordia, Kan.

Concordia, Kan.

(See Adv. Index Page 178)
Bruns Seed Co.
Sigourney, Iowa
Cashman Seed Co.
Owatonna, Minn.
Clark & Sons, C. S.
Wakeman, Ohio
(See Adv. Index Page 178)
Cochrane Seed Co., T. H.
Portage, Wis.
Coe Seed & Grain Co., D. O.

Portage, Wis. Coe Seed & Grain Co., D. O. Topeka, Kan.

(See Adv. Index Page 178)
Comstock, Ferre & Co.
Wethersfield, Con.
(See Adv. Index Page 178)
Corneli Seed Co.
St Lori. 25

St. Louis, Mo. (See Adv. Index Page 178)

Council Bluffs Seed Co.
Council Bluffs, Iowa
Coy Seed Co., Inc., The C. Herbert
Valley, Neb.

(See Adv. Index Page 178) Coy & Son, Chauncey P. Waterloo, Neb.

(See page 107) Crabbs, Reynolds, Taylor Co.

Craver-Dickinson Seed Co.
Buffalo, N. Y.
Dacotah Seed Co.
Bismarck, N. D.
Csee Adv. Index Page 178)
Dakota Improved Seed Co.
Mitchell, S. D.
Davanner Seed Co.

Davenport, Iowa (See Adv. Index Page 178)

Davis Seed Co., E. C. St. Peter, Minn. Davis, Zack

Delaware, Ohio Dickinson Co., Albert Chicago, Ill.

Farmer Seed & Nursery Co., Faribault, Minn.

(See Adv. Index Page 178) Fielding's Sons, Geo. F. Manhattan, Kan.

Forrest Seed Co., Inc.
Cortland, N. Y.
(See Adv. Index Page 178)

Frederick Seed Co. Aurora, Neb. (See Adv. Index Page 178)

Gilmore, E. L. C. Ashland, Neb.

Griswold Seed & Nursery Co. Lincoln, Nebr.

Gree Adv. Index Page 178)
Grossman & Son, W.
Petersburg, Va.
Gurney Seed & Nursery Co.
Yankton, S. D.

Healy Seed Co. Belle Center, Ohio Holbrook Grocery Keene, N. H.

Interstate Seed & Grain Co. Fargo, N. D. (See Adv. Index Page 178)

Jameson Havener Co. St. Paul, Minn.

Johnson, Inc., J. Oliver Chicago, Ill.

Kanuf & Tesch Co. Chilton, Wis. Keller & Sons, Geo. Quincy, Ill. Kelly Seed Company Peoria, Ill.

King & Sons, H. C. Battle Creek, Mich. (See Adv. Index Page 178)

Klingensmith Seed Co., E. J. New Augusta, Ind. Landreth Seed Co., D.

Bristol, Pa.

(See Adv. Index Page 178) Mangelsdorf Seed Co.

Atchison, Kan. Marshall Seed Co.

Marshall, Mo.
May & Son, Inc., W. H.
Alexandria, Va.

Meinershagen Seed House Higginsville, Mo.

Minneapolis Seed Co. Minneapolis, Minn. Minneapolis, M Minnesota Seed Co.

New Ulm, Minn.



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#### BULBS, PLANTS AND MISCELLANEOUS SEEDS-Continued

#### SEED CORN-Continued

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Morris, Ill.

(See Adv. Index Page 178) Nishna Valley Seed Co.

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Shenandonh, Iowa
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Minneapolis, Minn.

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Oklahoma Improved Seed Co.

Oklahoma Improved Seed Co.
Chickasha, Okla.
Ozark Nursery & Seed Co.
Nashville, Ark.
O. & M. Seed Co.
Green Springs, Ohio
(See Adv. Index Page 178)
Page Seed Co.
Greene, N. Y.
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Pedrick & Son, Geo. R.
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Peppard Seed Co., J. G.
Kansas City, Mo.
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Rice Seed Co., Jerome B.

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Rice Seed Co., Jerome B.
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Richards & Sons, Ross V.
North Manchester, Ind.

Robinson Seed Co., J. C.
Waterloo, Neb.
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Rogers Bros. Seed Co.
Chieggo, Ill.

Rogers Bros. Seed Co.
Chicago, Ill.
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Russell-Heckle Seed Co.
Memphis, Tenn.
Saunders Seed Co.
Tippecanoe City, Ohio
Schell, Inc., Walter S.
Harrisburg, Pa.
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Schoorl, Adrian J. San Francisco, Calif. Sherman Seed Co., W. G. Riverton, Iowa

Simmons Seed Co. Moorhead, Minn.

Sioux City Seed Co. Sioux City, Iowa (See Adv. Index Page 178)

Skromme Seed Co. Roland, Iowa

Standard Seed Co. Des Moines, Iowa

Steele, Briggs Seed Co., Ltd.
Toronto, Canada
(See Adv. Index Page 178)

Stevens, Ltd., F. B. Chatham, Ontario, Canada

Strayer Seed Farm Hudson, Iowa

Tanguay, Ltd. Quebec, Canada

Vance Bros. Tillsonburg, Ontario, Canada

Vermillion Seed Co. Vermillion, S. D. Western Seed & Irrigation Co. Fremont, Neb.

(See Adv. Index Page 178)

White & Co., Ltd., H. Shelburne, Ontario, Canada

Wood & Sons, T. W. Richmond, Va.

Woodruff & Sons, S. D. Orange, Conn. (See Adv. Index Page 178)

Young, George W. Owosso, Mich.

#### TREE SEEDS

Amtorg Trading Corporation New York, N. Y. (See Adv. Index Page 178) Colorado Seed Co.

Denver, Colo. Ellis. F. M.

Griffin, Ga. Herbst Brothers (Agts. for T. Sakata & Co., Yokohama, Japan)

New York City
(See Adv. Index Page 178)
Katzenstein & Co., Otto
Atlanta, Ga.
Loewith, Inc., Julius
New York City, N. Y.
Manshu Nosan Shokai, Inc.
Dairen, So. Manchuria, China
(See Adv. Index Page 178)
Morris & Snow Seed Co.
Los Angeles, Calif.
North Eastern Forestry Co.
Cheshire, Conn.
Rossebank Nursery Co.

Rosebank Nursery Co.

Huntsville, Ala. Schon, Ltd., Jacob S. Bruenn, Czechoslovakia

#### VEGETABLE ROOTS

Corneli Seed Co.
St. Louis, Mo.
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Hyde Co., H. A.
Watsonville, Cal.

Watsonville, Cal.
Ledden, Orol
Sewell, N. J.
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Woodbury, N. J.

#### WILD RICE

Carpenter, Louis J. Bena, Minn. Fairbanks, B. L. White Earth, Minn.

White Earth,
Fleming, Ernest
Bena, Minn.
Hamilton, Geo. D.
Detroit, Minn.
Hannah-Crawford, Ir
Green Bay, Wis. Inc.,

MacGregor-Dennand Aitkin, Minn. Minnesota Wild Rice Co. La Porte, Minn. Scott, George, Ballclub, Minn.

Ballclub, Minn.
Terrell's Aquatic Farm
Oshkosh, Wis.

#### BROKERS

Amtorg Trading Corporation New York, N. Y. (See Adv. Index Page 178) Appel Commission Co., C. H.

St. Louis, Mo. (See Adv. Index Page 178)

(See Adv. Index I Bernham, Inc. New York, N. Y. Crawford, Keen & Co. New York, N. Y. Duncan & Co., W. A. Kansas City, Mo. Dunn, Arthur G. New York City, N. Y. German, Gale T. New York, N. Y.

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Minnesota No. 13
N. W. Red Gold

Minnesota No. 13
N. W. Red Gold
Cap
Pride of the North
Early Murdock
Bloody Butcher
Minn. King
Ohio Improved

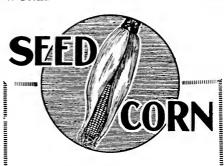
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#### BULBS, PLANTS AND MISCELLANEOUS SEEDS-Concluded

Brokers-Continued

Herbst Bros.

New York, N. Y.
(See Adv. Index Page 178)
Hershey Seed Co., Maxim
New York, N. Y.

Holst-Knudsen, S. New York, N. Y. Lecourt, Rene

Paris, France
Paris, France
Loewith, Inc., Julius
New York City, N. Y.
McCarty Co., The J. A.
Evansville, Ind.
McHutchison & Co.
New York, N. Y.
(See Adv. Index Page 178)
Mason. R. E.

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Sperco & Son, C. J.
New York, N. Y.
Steinhardter & Nordlinger
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Zahm & Co., J. F.
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New York City, N. Y.

Holst-Knudsen, S.
New York, N. Y.

Innes & Co., Ltd., W. G.
Finsbury Court, London, England

McHutchison & Co.
New York. N. Y.
(See Adv. Index Page 178)

Meadows & Co., Thos.
New York City, N. Y.

Pitt & Scott

Pitt & Scott New York, N. Y. Rauand, A. Paris, France

#### SEED COMMISSION FIRMS

American Seed Co.

Detroit, Mich.
Appel Commission Co., C. H.

St. Louis, Mo. (See Adv. Index Page 178)

Benton Grain Co. Kansas City, Mo.

Kansas City, Mo.
Bernham, Inc.
New York, N. Y.
Flower Co., S. W.
Toledo, Ohio
Hulburd, Warren & Chandler
Chicago, Ill.
Innes & Co., Ltd., W. G.
Finsbury Court, London, England
King & Co., C. A.
Toledo, Ohio
Loewith, Inc., Julius

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St. Louis, Mo.
Pitt & Scott, Inc.
New York City, N. Y.
Pope & Eckhardt Co.
Chicago, Ill.
Radwaner Seed Co., I. L.
New York City, N. Y.
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Sevin-Vincent Seed Co.
San Francisco, Calif.
Southworth & Co.

Southworth & Co. Toledo, Ohio Stalknecht & Meyer

Copenhagen, Denmark Steinhardter & Nordlinger New York, N. Y. Zahm & Co., J. F. Toledo, Ohio

SEED STORAGE AND DISTRI-BUTION

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Crooks Terminal Warehouse

Chicago, Ill.

Chicago, III.

(See Adv. Index Page 178)

Currier-Lee Warehouse Co.
Chicago, III.

Binyon-O'Keefe Fireproof Storage Co.
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**Page 178** 

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#### SUCCESS WITH INCUBATORS

THERE are four distinct factors that influence the successful operation of an incubator, viz.: the operating room, the machine, the eggs and the operator.

#### THE OPERATING ROOM

A well ventilated cellar or basement makes the best place in which to operate an incubator. Some cellars are poorly ventilated, however, being either too deep in the ground, too damp or possibly too dry—conditions far from ideal for hatching. In such cases a clean room in any part of the house or in an out building will be much better.

Choose a convenient place where the incubator will be undisturbed, where the sun will not shine on it at any time during the day, and where the ventilation can be readily controlled. Maintain a room temperature around 50 degrees. A heated room is not advisable except where the incubator temperature cannot be kept up without it in extremely cold weather. Heated air is not as moist and pure as it should be when it enters the egg chamber.

#### THE MACHINE

For convenience, incubators are generally classed as manmoth machines and small machines. The mammoth incubators run in sizes from 1,200 eggs to 10,000 or 20,000 egg capacity and higher. They are usually sectional in construction, heated by water with one coal-burning heater as the source of fuel. Gas or oil is used in some types and there are various distinctive features peculiar to the different makes of machines.

Small incubators range in size from 40 egg capacity up to 200, 300, 400 and even 600 and 800 capacity. They are divided into two classes, hot water machines and hot air machines. The hot water incubators depend upon the principle of radiation to distribute heat. A metal tank or pipe system, usually made of copper, is built in fixed position into the incubator and is filled with water heated by a lamp attached to the machine. The heat radiates to the eggs on the tray in the egg chamber, keeping them at the required temperature.

In the hot air type of incubator there are some variations in the exact principle of heating. In some makes, warm air is introduced into the egg chamber and diffuses over the eggs; in others, the heated air does not enter directly into the egg chamber, but is confined first to a metal tank from which heat radiates to the eggs, and in still others a combination is employed.

The source of heat is commonly an oil-

burning lamp. Electricity has also been found very satisfactory and there are some excellent electric machines now on the market.

Oil lamps are located differently in various makes of machines. In some, the lamp or heater is carried on the side, in others, under the machine at one end, and in still others, in the center beneath the egg chamber.

Incubators are manufactured in both round and rectangular shapes, each distinctive in design and obtainable in various sizes. Some are all-metal, some are metal covered over wood and others are all wood in construction. Another material used is pulp wall board.

Most manufacturers completely assemble the machine before it leaves the factory, the only exception being the legs, the lamp bracket and lamp, and the regulator. These are packed inside of the machine and the whole carefully crated for shipment.

In some instances, incubators are assembled only in part, shipped knockeddown flat and have to be put together by the dealer or his customers.

There are numerous makes of incubators on the market which give entire satisfaction when operated under proper conditions and when managed according to the explicit directions of the manufacturer. No incubator improperly located and poorly handled can be depended upon for a maximum hatch.

#### THE EGGS

The character of the egg itself is an important factor in the selection of hatching eggs. Some eggs are too round and some too long to be used for hatching. Only eggs that are normal in shape and size should be classed as acceptable. Reject all irregular shapes, abnormally large or small sizes, rough shells, ringed or ridged shells and shells that are too porous.

Only eggs from strong, vigorous, healthy stock should be used. The operator should know something of the history of the parent stock—whether it is free from disease and whether it has been bred from good producing strains. That brings the danger of weak hatches down to a minimum. Many good hatching eggs, however, are spoiled through improper handling. An egg may be strong in fertility when laid and still fail to hatch through lack of good care prior to incubation. Eggs for hatching should be gathered every few hours, so as to prevent them from becoming either chilled

# MOE'S POULTRY SUPPLIES



Star Fount (For Mason Jars)



"Big Boy" Feeders



Chick Feeders



Magazine Feeder and Waterer



Grit Boxes

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Is a Complete and Distinctive Line of

## Good Poultry Equipment

Moderate in Price and Very Popular with the Busy Poultry Man

Nothing Better Made

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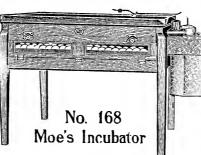
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or heated. The one condition is as bad as the other. The growth and development of the germ will start at summer heat. Development will begin with only a few hours of heat. Then if the egg becomes chilled, growth of the germ is checked and it weakens and dies.

Eggs for hatching should be kept in a cool place at a temperature from 50 to 60 degrees. They should not be kept for long, however, as the fresher the eggs, the better they will hatch. A week to ten days should be the limit to be perfectly safe. Fertility weakens as the eggs become older. If eggs are to be kept more than a few days before incubation, it is well to turn them once or twice a day to keep the yolk from settling and sticking to the shell.

Eggs for hatching should not be subjected to rough handling. The constant vibration that results from improper packing of eggs for shipment, tends to weaken the germ to a degree that may prevent

hatching.

#### THE OPERATOR

A good machine, properly located and

filled with strong, fertile eggs of normal size, is dependent upon the operator for a successful hatch. Too frequently the purchaser of an incubator overlooks or intentionally discards the printed directions of the manufacturer and proceeds to run the machine according to his own idea of This is the most frequent ilure. Manufacturers have operation. cause of failure. tested their machines in every possible way and the printed directions that go to the purchaser are the result of exhaustive experiments. Experts have handed down the rules of operation and it is rarely that they can be improved This fact should be impressed upon the customer very strongly at the time the machine is purchased. complaints by customers against the upto-date incubators of today can be traced to faulty operation.

All that is required of the operator is ordinary common sense combined with a determination to follow the manufacturer's directions to the letter. If this requirement is fulfilled there will be few complaints and far better hatches.

#### POULTRY DISEASES

By Earl M. Whitney

SOME of the common poultry diseases, their causes and symptoms are:

#### COLDS

Causes — Insanitary conditions, dampness and poor ventilation in poultry house. Contact with other birds so afflicted.

Symptoms—Coughing, sneezing, watery eyes and nostrils and general listless ap-

pearance.

Remedy—Eliminate the cause. Isolate sick birds. Use some good disinfectant in poultry house and treat fowls with a well-known cold remedy.

#### ROUP

Causes—Neglected colds; contact with other birds so afflicted; contact with germs of Roup which are frequently carried by one means or another to healthy, vigorous flocks. The roup germ is highly contagious.

Symptoms—Same as ordinary cold to begin with, followed rapidly by discharge from nostrils of mucus having very bad odor; also discharge from eyes which, if allowed to go without treatment, will cause swelling and closing; white patches and cheesy white growth in mouth which often becomes so bad as to prevent its closing. Cheeks swell up like mumps.

Remedy-Isolate sick birds and clean

and disinfect houses thoroughly, administering some good roup preventive to all exposed birds as well as those afflicted. Kill and burn all fowls in advanced stages of this dread disease if they do not respond to treatment. Wash face and eyes of birds with diluted disinfectant and remove all sticky substance. It is well also to dip the bird's head into this solution. As birds show signs of improvement, give them some good conditioning remedy that will serve as a tonic.

#### CHICKEN POX

Causes—Overcrowded, insanitary conditions, dampness, etc. Contact with other birds so afflicted. Germ very contagious and easily introduced into healthy flock by various ordinary means hard to prevent

Symptoms—Pimples on comb and head which rapidly increase in size, becoming sores and ulcers and frequently attacking the eyelids to the extent of closing them and in neglected cases spreading to other

parts of the body.

Remedy—Eliminate the cause, disinfecting house thoroughly and isolating afflicted birds. Apply good chicken pox remedy to both afflicted and exposed birds. Administer some good cathartic through the drinking water and add a reputable tonic or regulator to the mash feed.



# Poultry Remedies & Minerals Assure Dealers

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is complete — fills every demand for Poultry Remedies and Mineral Feeds. Manufactured and guaranteed by Prof. Quisenberry, recognized as one of the world's leading poultry authorities.

Complete system of sales co-operation and our local advertising over dealer's firm name doubles turnover with increased profits. We Guarantee Quisenberry Products—Free Poultry Service to dealer's customers. Have Prof. Quisenberry and his full staff of American Poultry School Experts diagnose and correct their poultry ailments—Saves dealer's time and makes you money. Send

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#### CANKER

Causes — Insanitary conditions, dampness in poultry house, moldy food, aftermath of other diseases which have left fowls in weakened condition from which canker develops. Just as sore eyes or deafness in children are frequently the outgrowth of measles.

Symptoms—Sores in mouth and throat which develop into ulcers and white patches. Frequently a swelling is caused

as in roup.

Remedy—Eliminate cause if possible by thoroughly disinfecting poultry quarters. Isolate sick birds. Apply strong disinfectant directly to affected parts by swabbing out mouth and throat. Add tonic or regulator to the mash feed.

#### RHEUMATISM

Causes-Poor ventilation of houses resulting in dampness; undue exposure of birds to bad weather conditions.

Symptoms—Lameness; swollen joints; a stiffness in carriage that is unmistak-

able.

Remedy—Apply some good liniment made for this specific purpose. Improve living conditions of fowls; avoiding undue exposure to the elements and keeping them in the poultry house on rainy, damp days.

#### CROP BOUND

Symptoms-Swelling and souring of crop. Listlessness and lack of appetite.

Causes—Obstruction in crop such as hay or straw or other foreign substance. Eating sour food or indigestible matter of some sort.

Remedy-Massage crop frequently. If this has no effect, try to empty crop through the mouth. In the event this is of no avail, an operation is necessary. The crop is cut open, thoroughly cleaned and disinfected, sewed up and the bird is placed on a diet of mash feed in which is mixed a good tonic or regulator.

#### BUMBLEFOOT

Causes-Bruised condition of foot due to flying from one spot to another or jumping from roosts or nests to poultry house floor, the foot becoming sprained or injured by contact with stones, nails or other hard objects.

Symptoms-Lameness causing noticeable limp; swelling of soft part of foot which ultimately forms an abscess.

Remedy-When abscess has formed, pus should be removed and affected part thoroughly washed out with good disinfectant. A healing ointment should then be applied and the foot bound up so as to prevent any foreign substance from coming into contact with the wound until it is healed. It is sometimes necessary to repeat this operation. Bird should be kept in cage or small coop where it will get rest and quiet until sore is healed.

#### CONSTIPATION

Causes-Lack of exercise; improper feeding.

Symptoms --- Listlessness; indigestion;

stoppage of bowel movement.

Remedy-Some good cathartic followed by closer attention to scientific feeding methods.

#### EGG BOUND

Cause-Disarrangement of egg organs, usually due to over-fat condition.

Symptoms-Continued unsuccessful ef-

forts to lay.

Remedy—Except in severe cases, application of sweet oil through the vent and gentle massaging of the abdomen will release the egg. The fowl's grain diet should be lessened and the consumption of mash feed increased. Feed grain only to induce sufficient exercise to prevent overfat condition.

#### SCALY LEG

Cause—Insanitary house and surroundings which encourage growth of mites that attack the scales of the fowl's legs, resulting in rough, unsightly growth and swelling.

Symptoms-Swollen, rough, unsightly

appearance of legs.

Remedy-Wash well with soap and water and apply scaly leg ointment to affected parts until condition clears up. Prompt action before scaly leg is allowed to develop to any great extent will eliminate this trouble in a few treatments.

#### WORMS

Causes—Insanitary food and living conditions.

Symptoms—General ill health along

with seemingly good appetite.

Remedy—There are now worm emul-sions on the market which are reported as relieving this condition. Until recently the treatment of worms in fowls has been a problem that presented great difficulty to leading poultry authorities.

#### WHITE DIARRHEA

Causes—Contagion or inheritance. Symptoms - Listless, drooping, rundown appearance. Droppings white or

creamy colored.

Remedy—In advanced stages, should be killed and burned. chicks Where there seems to be a chance of saving them, separate immediately from remainder of brood, disinfect everywhere as the disease is very contagious. Administer some well-known White Diarrhea preventive, following directions very carefully.

# MODERN and BETTER

... Legume Inoculation ...



#### **EXCLUSIVE FEATURES**

HARDY WORKERS \farm bred, hardy bacteria; resistant forms that produce \forms on roots.

POSITIVE RESULTS MODERN SEED

TREATING

Inodules guaranteed—money back guarantee on every package since 1914—user is protected.

dry powder packing permits use with any seeding method; may be used with or without water; adheres to dry seed.

LONG LIFE McQueen process insures effectiveness under difficult conditions—such as: overseas shipment; unfavorable soil conditions; uncommon seeding methods.

NATIONALLY ADVERTISED— FRIENDLY CO-OPERATION—
REAL SELLING HELPS— ATTRACTIVE DEALER PRICES—
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# THE McQUEEN BACTERIA CO.

Baltic, Ohio



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Discounts yielding a nice profit to the dealer.

Dependable bacteria cultures for seed inoculation. Made by a Bacteriologist twenty years in the business.

Standard retail prices

THE EDWARDS LABORATORY, Lansing, Mich.

"The early worm gets the bird"

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# LONG'S EARLY BIRD POULTRY TONIC

'gets the worm'

The only COD LIVER OIL TONIC that controls Intestinal Worms
Strongest Money-Back Guarantee Ever Written
Quart, 75c prepaid; Gallon, \$2.50 prepaid; 6 Gal Case, \$2.00 per gal.
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#### INOCULATION OF LEGUMES

LEGUME inoculation is fast becoming a necessity wherever legume crops are grown, especially if planted for the first time on land not previously inoculated.

Commercial firms are manufacturing cultures for inoculating the different legume groups. These firms realize the necessity of producing good products and maintain laboratories which are operated by scientific men. State and government agencies welcome the commercial manufacture of inoculating cultures providing they are properly prepared.

This question of legume inoculation is of great importance to seedsmen, for the demand for inoculating cultures is constantly increasing, and the seedsman is the proper agent for the distribution of these cultures. He sells the seeds and should urge upon his customers to buy inoculating cultures for the seeds that require inoculation to assure perfect stand.

There are a number of reputable companies that are manufacturing inoculating These firms employ chemists who have made this line of work a lifelong study. Each culture for the different kinds of legumes is carefully prepared and when properly mixed with the seeds to be planted the desired inoculation re-These commercial cultures are insults. spected and tested from time to time by state and government officials, which tends to keep manufacturers careful as to the potency of their products. As a result of the painstaking manner in which these legume cultures are manufactured, some excellent cultures are now available.

Farmers are realizing more each year

that the use of these tested, artificial cultures is far more satisfactory than the old-fashioned soil inoculation method. They also feel that the use of these cultures always assures them of a good stand of any legume they happen to plant.

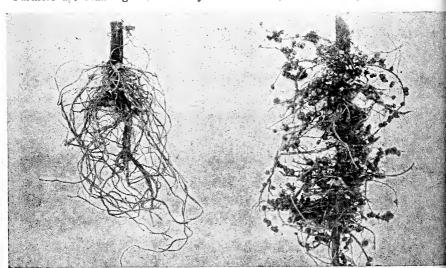
Agricultural colleges have for a number of years done some excellent educational work in getting the farmer to realize the importance of inoculation. They have not been alone in this educational work, for many of the manufacturers of inoculating cultures have spent much time and money in this educational campaign. There are few farmers who plant legumes that do not inoculate their seed.

Seedsmen should handle a line of inoculating cultures which has been proven to be O.K. Manufacturers put up this material in attractive containers. Different cultures are required for different crops. These cultures are put up in packages of different sizes depending upon the amount of seed to be inoculated. The seed should be mixed with the culture. Specific directions are found on the different packages. When everything is considered, inoculating cultures is a most profitable line for seedsmen to handle and it undoubtedly will become more and more profitable when the value of inoculation is more universally known.

The following is copied from page 13 of "Farmers' Bulletin 315," from the U. S. Department of Agriculture:

"Inoculation (of legumes) is desirable—
(1) If the soil has not previously borne leguminous crops.

(Continued on page 120)



Left-Roots of Plant Not Inoculated. Right-Roots of Plant Inoculated, Showing Nodules.



The Stimuplant "line" now includes our own cultures for legume inoculation, under the brand name of STIMUGERM (both jelly and humus media)

# Old friends in new clothes

THE personnel of the organization which for ten years has made and marketed Farmogerm and Humogerm, has now formed a new company. Our own cultures for legume inoculation are now being placed on the market under the name STIMUGERM, a sister product to the old well known STIMUPLANT (plant food) which we shall continue to market.

The same strong support which has been given Farmogerm and Humogerm since 1919 will be put behind STIMUGERM, by the same people. The highest type of laboratory skill, and business administration will insure the most pleasant relations with old customers and new, and the maintenance of highest standards.

A complete assortment of cartons, posters, descriptive leaflets, dealer price sheets and other materials, including electros for advertising use are now ready.

# Stimuplant Laboratories

Long Island City, N. Y.

(Continued from page 118)

(2) If legumes previously grown on the same land were devoid of nodules.

(3) If the legumes to be sown belong to a species not closely related to one previously grown on the same soil.

(4) If the soil produces a weak growth of legumes, even though their roots show some nodules.

"It is significant of the relative value of pure culture inoculation that a high percentage of beneficial results is being obtained, not only where legumes new to the region are being tried, but where the ordinary legumes used in rotation have been inoculated, a phenomenon which is undoubtedly due to the increased virility of the nodule-forming bacteria resulting from the proper development of the pure cultures in the laboratory. It is also true that the crops following the inoculated legumes have in many cases shown gains not evident in the legume crop. practice of inoculating is therefore justified where legumes are naturally inoculated, but do not seem to reach their full vigor nor to give the best results as green manure.

The following seeds require inoculation in order to assure a perfect stand: Red clover, alfalfa, sweet clover, alsike clover, white clover, crimson clover, bur clover, vellow trefoil, lespedeza, garden peas, field peas, lentil, vetches, sweet peas cowpeas, soybeans, garden beans, field beans, lima beans, velvet beans, peanuts, beggarweed, lupines, sainfoin and other legumes.

Legume crops are the most profitable They are ones planted by the farmer. soil builders and are used in every good crop rotation practiced by the farmer. In order to emphasize the value of legume crops the following table has been compiled which shows the relative feed value of legumes compared with some of the non-legume crops:

Digestible Nutriments in 100 Pounds

	Lotai			6			
Dry Matter							
	in	Crude	Carbo-				
	100 lbs.	Protein	hydrates	Fat			
Name of Crop	Lbs.	Lbs.	Lbs.	Lbs.			
Alfalfa, Hay	91.9	10.5	40.5	0.9			
Clover, Alsike	90.3	8.4	39.7	1.1			
Clover, Crimson	90.4	10.5	34.9	1.2			
Clover, Red	84.7	7.1	37.8	1.8			
Corn, Grain	89.4	7.8	66.8	4.3			
Corn, Fodder	90.8	1.0	31.2	9.7			
Cotton Seed Meal	93.0	37.6	21.4	9.6			
Cowpeas, Seed	85.4	16.8	54.9	1.1			
Cowpeas, Hay	89.5	9.2	39.3	1.3			
Oats, Grain	89.6	8.8	<b>49.2</b>	4.3			
Oats, Hay	86.0	4.7	36.7	1.7			
Peanuts, Shelled	92.5	25.1	13.7	35.6			
Peanut Vine Hay	92.4	6.7	42.2	3.0			
Soybean, Seed	88.3	29.1	23.3	14.6			
Soybeans, Hay	88.2	10.6	40.9	1.2			
Sweet Potatoes	28.9	0.8	22.9	0.3			
Vetch, Hairy, Hay.	88. <b>7</b>	11.9	40.7	1.6			
Vetch & Oat Hay	85.0	8.3	35.8	1.3			
Velvet Beans	90.0	9.6	52.5	1.4			



#### FOR ALFALFA, SWEET CLOVER, CLOVERS, SOYBEANS — ALL LEGUMES



Scientifically Prepared

Jelly Medium

Skilled Bacteriologists

Prices to Farmers

Alfalfa, Sweet Clover-Small Seeds 1 bu. size for 60 lbs. seed......\$0.50 2½ bu. size for 150 lbs. seed...... ½ bu. size for 30 lbs. seed...... Soy Beans, Cow Peas-Large Seeds 2 bu. size for 120 lbs. seed ......\$0.50 5 bu. size for 300 lbs. seed.... 1 bu. size for 60 lbs. seed....

Made Right-Sold Right-Prompt Service

It will pay you to write us for full particulars

LABORATORIES THE URBANA URBANA

NITRAGIN FOR ALFALFA-CLOVERS-PEAS-BEANS-VETCH-ALL LEGUMES



"Established in 1898"

The Original Soil Inoculator

PRESENTS ANOTHER WINNING FEATURE IN 1929

# LEGUME GERM COUNT ON EVERY CAN

NITRAGIN leads again! Each and every NITRAGIN can will in 1929, in addition to the DATE and Price, contain the guaranteed scientific LEGUME GERM COUNT. Think of what that means.

The Germ Count gives the Seedsman a reliable standard—"a yardstick"—to measure inoculator propositions with—tells him at a glance how many legume germs he is buying per dollar invested—places inoculator purchases on a sound business basis.

# IT'S THE NUMBER OF FRESH LEGUME GERMS THAT COUNT—NOT THE PRICE OR THE SIZE OF THE CONTAINER

For that reason NITRA-GIN costs less than the cheapest inoculator in the market in like sizes, for NITRAGIN exceeds some by billions and others by millions of legume germs per container. Why not buy your inoculator like you buy seed—"so many" bacteria per bushel?

Millions of farmers are reading this message in their National and Local publications. Capitalize with us! This will be another NITRAGIN Year.

#### ALWAYS FIRST-NEVER FOLLOWS

- FIRST Commercial Inoculator in the World, 1895.
- 2. FIRST Scientific Com. Inoculator in America, 1898.
- 3. FIRST To allow Dealer Exchange Privilege.



- 4. FIRST To be sold on Bushel basis.
- 5. FIRST To DATE Labels.
- FIRST To place LEGUME GERM COUNT on every package.

Write us for Prices and Sales Plans.

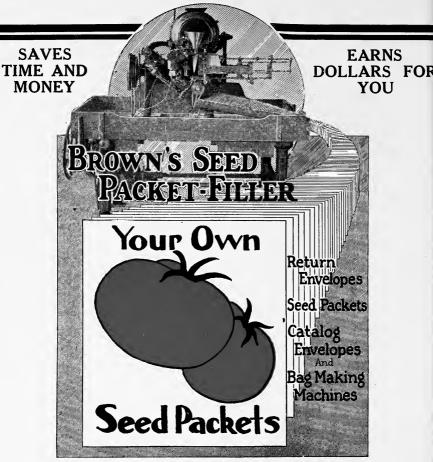
NITRAGIN FOR ALFALFA—CLOVERS—PEAS—BEANS—VETCH—ALL LEGUMES

# THE NITRAGIN COMPANY, INC.

Ninth and National Avenues

**MILWAUKEE** 

WISCONSIN



## BROWN BAG FILLING MACHINES

For Filling Seeds in Flat Packets Solves "HELP" Problem

They do the work automatically—faster, neater and more accurately than by hand methods—prevent loss from waste—protect

both you and your customer.

We manufacture a complete line of Return Envelopes, Seed Packets, Catalog Envelopes, Bag-Filling Machines for filling seeds in flat packets and Bag-Making machines. BROWN BAG FILLING MACHINES automatically fill flat packets with all varieties of seeds. Measure the seed. Fill the packet. Seal it tight. Require but one operator. 'Deliver 3,000 packets per hour. Reduce labor costs. Eliminate waste. Insure accuracy. Speed up orders.

Write Us

## THE BROWN BAG FILLING MACHINE COMPANY **MASSACHUSETTS**

**FITCHBURG** 

#### SPRAYING CALENDAR

This calendar is recommended from experience gathered by men connected with State Agricultural Experiment Stations and from other sources.

DISEASE	CURE	FIRST	SECOND	THIRD	FOURTH	REMARKS AND CAUTION
OR INSECT		SPRAYING		SPRAYING	SPRAYING	CAUTION
Codling Moth	. Amonatas ta	1 44 4000 44	APPLI	<u> </u>	7 7 0 0 le al	Later engales i
Coding Moth	Arsenates in Bordeaux or ar- senate of lead 1 or 1½ lbs. to 50 gallons.	blossoms fall.	later,	later.	7 weeks	Later spraying, it made should be made with diluted solutions.
San Jose Scale	Lime-Sul-	late in winter or early in spring.				Use lime-sulphur only when trees are dormant
<b>V</b> eab	L i m e - Sul- phur.	Just before blossoms open.	Within a week after blossoms have dropped.	Same 7 to 10 days later.	Repeat 10 to 14 days later.	The spray just befor blossoms open is ver, essential for scab.
Woolly Aphis	Nicotine Sul- phate ½ pint to 50 gallons of water.	When leaf - buds are showing tip green.				Don't use stron emulsion when trees ar in full leaf.
		_	ASPARAC	SUS		
Asparagus Rust	Bordeaux,				•	Plant healthy roots of resistant varieties.
			BEAN			
Anthracnose	Bordeaux,	While origi- nal seed parts are still on seedlings,	10 days			
		CABBAGE	E AND CA	ULIFLOV	VER	
Cabbage Worm	Arsenate of lead 1 lb, to 50 gallons of water.	With first appearance of worm.	Whenever worms are observed.	Same.	Same.	Force spray into center of plants.
			CHERR	Y		
Bot	L i m e - Sul- phur.	Before blos- soming,	After blos- soming.	2 weeks	2 weeks	•
Curculie	Arsenate of lead in Bordeaux.	Before blos- soming.	As blossoms	1 week later.		Avoid strong solution
			CUCUMB	ER		
Ducumber Beetle	Powdered Ar- senate of lead or Calcium Arsen- ate.	Soon as plants appear.	Week later.	Week after second.	Week after third.	
			CURRAN	1T		10.0
San Jose Scale	Lime-Sul- phur.	Same as ap-				
Worma	Arsenate of lead.	When worms first appear.	Repeat in 3 or 4 days.	Repeat as second.	3	Look for worms of under side of leaf.
		. (	GOOSEBE			
Kildew	Lime-Sul- phur.	Before blos- soms open,	After blos- soming.	10 days	10 days	
Worm.	Arsenate of lead.	When worms	Repeat in 3 or 4 days.			
-			GRAPI			
Anthracnose	Bordeaux.	Just before buds open.	Just before blossoming.	Just after fruit has set.	Ten days later. Bor- deaux.	
Black Bot and Powdery Mil- dew	Bordeaux.	Just before blossoming.	Just after fall of blos- soms.	Soven to 10		

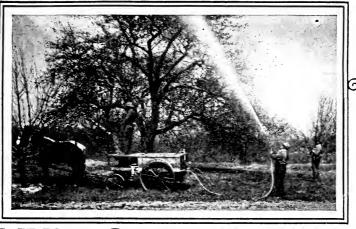
(Spraying table continued on page 124)

#### SPRAYING CALENDAR, Continued

This calendar is recommended from experience gathered by men connected with State Agricultural Experiment Stations and from other sources.

OR INSECT	CURE	FIRST	SPRAYING	THIRD SPRAYING	FOURTH SPRAYING	REMARKS AND CAUTION
			PEA	R	•	
Scab	Lime-Sul- phur.	When leaves are half grown.	Just befor the flower bud open.	e After blos- soms drop.		
Codling Moth	Arsenates in Bordeaux.	As with Apple.			į.	
San Jose Scale	Lime-Sul-	In fall or early spring.				See Apple,
			PLUI	MI.		
Rot	Lime-Sul- phur.	As buds are swelling.	Just afte blossoms fall	Three or e	As fruit begins to color.	Repeat every 7 or 1 days.
Curculio	Arsenate of lead in Bordeaux.	With start- ing of buds.	Just afte blossoms fall	Five days	5	Jar, gather and de stroy curculios and stun plums.
San Jose Scale	Lime-Sul-	In late fall or early spring.				
			PEAC	H		
Leaf Curl	Lime-Sul- phur.	In fall or spring.	opening.		Not required if others are well done	:
Rot and Scab	Lime-Sul- phur.	As buds are swelling.	Three or weeks afte fall of blos soms.	Two or 3	Repeat.	Destroy all mummies.
Bud Moth	Arsenate i n Bordeaux.	With open- ing of buds.	Soms.			Use only half usus amount of poison.
San Jose Scale	Lime-Sul- phur.	In late fall or early spring.				See Apple,
			POTA	07		
Early Blight	Bordeaux.	When plants are 6 inches high.	Two weeks	Two weeks	Two weeks	Apply until five applications have been made.
Late Blight	Same.	Same.	Same.	Same.	Same.	
Scab · °	Soak seed in Corrosive Sub- limate.		Solution (2	oz. in 16 gallor		
Potato Bugs	Arse nate of lead or Paris Green.	When beetles or young ap- pear.	As soon as	bugs appear.		Arsenate of lead. Ibs. to 50 gals, of water for Potato Bugs alone.
			QUING	CE		
Fruit and Lea Spot	t L i m e-Sul-	Just before blossoms open.	After blos- soms drop.	Two weeks later.	Two weeks later.	
San Jose Scale	Lime-Sul-	In late fall or early spring.				See Apple.
		\$	STRAWB	ERRY		
Leaf Spot	Bordeaux.	Before blos- soms open.	2 or 3 weeks later.			Mow off tops and burn, soon as fruit is picked.
			TOMA	го		
Anthracnose	Bordeaux.	Soon after	3 weeks lat-	3 weeks lat-		
Leaf Spot	Bordeaux.	fruit sets. At trans- planting time.	2 weeks later.	er. 2 weeks lat- er.	2 weeks later.	
	w	ATERME	LON ANI	MUSKM	ELON	
Anthracnose an Leaf Spot	d Bordeaux.	When plants begin to vine.	2 or 3 weeks	2 or 3 weeks		The intervals from 1st spraying is 2 weeks for muskmelons and 3 weeks for watermelons.

1:



# MYERS SPRAY PUMPS A Style for Every Service

The tendency of spray pump design is toward greater efficiency and better results. Spray pumps of yesterday will not answer for the standards of today. To spray for profit now means scientific spraying, and scientific spraying whether on a large or small scale involves speed, thoroughness, economy and labor reduction to which must be added dependability of equipment.

The splendid record of Myers Spray Pumps in every field of the spraying world stands today as our best testimonial for them, and accounts in no small measure for their selection and use by leading orcharists, seedsmen, nurserymen, gardeners and farmers of this and of many other lands.

The Myers Line of Spray Pumps is complete and proven—a style and size for any service—with sought after features which both you and your customers will appreciate for their real worth.

Write or wire for catalog and prices.



THE F.E.MYERS & BRO. CO.
No. ORANGE ST. ASHLAND, OHIO



# We Have an Attractive 1929 Dealer's



# **PROPOSITION NITROPHOSKA** FLORANID (Urea)





These two plant foods have gained deserved popu-These two plant 1000s have gained deserved popularity because they make good in customer's soil. Every dealer who handles them gets repeat demands after a customer is once started. Our 1929 Proposition works with each dealer in his own trading area helping him move the goods through advertisements over his own name in his local papers.

LOCAL PAPERS Write for details about our special dealers assortments -the profit is generous.

# SYNTHETIC NITROGEN PRODUCTS CORP.

Garden Department 285-G MADISON AVENUE

**NEW YORK** 





# 6 Good Reasons Why Leading Seedsmen Sell VIGORO

Dependable in Its Results—Scientifically balanced and complete, Vigoro produces maximum results—Swift & Company's name on the package is your assurance of highest quality.

A Wide Market—Every one of your customers is a prospect for at least 100 lbs. Figure what this means to you in dollars and cents.

Profitable—Directly and Indirectly—A good direct profit on each sale—also an indirect profit. Since it assures the maximum productivity of your seeds, it makes better satisfied customers for you. This indirect profit alone is worth considerable to your business.

Nationally Advertised—Never before has any plantfood concern ever attempted an advertising campaign such as will back your efforts on Vigoro in 1929. National advertising in the best publications—large space advertising in metropolitan papers—all telling the Vigoro story to your customers in every part of the country.

Convenient to Stock—Packed in heavy, white, paper-lined, cotton bags—attractively printed—convenient sizes—clean and odor-less—compact packages requiring the minimum storage space.

Effective Sales Aids—Window trims in full color, attractive pamphlets, store cards, electrotypes, and stickers—movie slides—all furnished free to help you capitalize on this tremendous campaign.

Swift & Company Chicago, Ill.

Vigoro



Complete Plant Food

Endorsed by Leading Landscape Gardeners and Nurserymen

## SIDE LINE MERCHANDISE

#### FERTILIZERS AND SPREADERS

#### **FERTILIZERS**

American Limestone Co. Knoxville, Tenn. Armour Fertilizer Wks. Chicago, Ill. Atlanta Chemical Co. Atlanta, Ga.
Atlanta, Ga.
Barrett Co., The
New York City, N. Y.
Bon Arbor Chemical Co.
Paterson, N. J.

Paterson, N. J.
Bramley & Son
Cleveland, Ohio
Central City Fertilizer Works
Central City, Iowa
Cincinnati Plant Food Co.
Cincinnati, Ohio
Darling & Co.
Chicago, Ill.
Empire Carbon Works
St. Louis, Mo.
Federal Chemical Co.
Columbia, Tenn.

Columbia, Tenn.

Columbia, Tenn.
Fertall Co.
Newark, N. J.
Fidelity Chemical Corp.
Houston, Texas
Flower City Plant Food Co., Inc.
Rochester, N. Y.
Friedman Tobacco Products Corp.
York, Pa.
Fujiya Fertilizer & Seed Co.
Moneta, Calif.
Grasselli Chemical Co. The

Grasselli Chemical Co., The

Cleveland, Ohio

Jones Phosphate Co., Robert Nashville, Tenn. Magnesia Products Co. Milwaukee, Wis. National Plant Food Co. Eau Claire, Wis.

Natural Guano Co.

Aurora, Ill.

(See Adv. Index Page 178)

Ober & Sons Co., F.

Baltimore, Md.

Parimote, Mu.

Pacific Manure & Fertilizer Co.
San Francisco, Calif.
(See Adv. Index Page 178)

Parmenter & Polsey Fertilizer Co.
Boston, Mass.

Plant Products Co.
Baltimore, Md.
(See Adv. Index Page 178)

Potash-Marl, Inc. New York City, N. Y.

Premier Poultry Manure Co. Chicago, Ill. (See Adv. Index Page 178)

Pulverized Manure Co.

Chicago, Ill. (See Adv. Index Page 178)

Read Phosphate Co. Nashville, Tenn.

Reading Bone Fertilizer Co.
Reading, Pa.

Reading Chemical Co.
Reading, Pa.
Robin Jones Phosphate Co.
Nashville, Tenn.

Royster Guano Co., F. S.
Norfolk, Va.
Ruhm Phosphate & Chemical Co.
Mt. Pleasant, Tenn.
Sanderson Fertilizer & Chemical Co.

New Haven, Conn. Smith Agricultural Chemical Co. Columbus, Ohio Sodus Humus Co.

Benton Harbor, Mich. Stadler Products Co.

Stadler Froducts Co.
Cleveland, Ohio
Stevens Chemical Manure Co.
London, England
Stimuplant Laboratories, Inc.
Long Island City, N. Y.
(See Adv. Index Page 178)
Swift & Co.
Chieseo III

Swift & Co.
Chicago, III.
(See Adv. Index Page 178)
Synthetic Nitrogen Products Corp.
New York City, N. Y.
(See Adv. Index Page 178)
Thompson & Sons, Ltd., Wm.
Clevensford, Scotland
Tipulité Co.

Tipulite Co.
Darlington, England
Uniform Products Co.

Lancaster, Pa. Virginia-Carolina Chemical Co.

Virginia-Carolina Chemical Co.
Richmond, Va.
(See Adv. Index Page 178)
Williamson, Garfield
New York, N. Y.
Wilson, Inc., Andrew
Springfield, N. J.
(See Adv. Index Page 178)
Wilson & Co.
Chicago, Ill.
York Chemical Works
York, Pa.

#### FERTILIZER SPREADERS

Baier Bros. Mfg. Co. Cissna Park, Ill. Bateman Co., Fred H. Philadelphia, Pa.

Browning, George William Clinton, N. Y. Clinton, N.

Crown Mfg. Co. Phelps, N. Y.

Emerson-Brantingham Implement Co. Rockford, Ill.

Iron King Imp. Co. Madison, Ohio

Peerless Fertilizer Distributor Co., The Cedar Rapids, Iowa Southland Seed Co.

Orlando, Fla.

#### GARDEN AND FIELD IMPLEMENTS AND SUPPLIES

#### CULTIVATORS

Acme Cultivator Co. Salem, Ohio Akron Cultivator Co. Akron, Ohi**o** Allen & Co., Inc., S. Philadelphia, Pa. S. L. American Fork & Hoe Co. Cleveland, Ohio (See Adv. Index Page 178)

Bacon Mfg. Co. Pontiac, Mich.

Bateman Co., Fred H. Philadelphia, Pa.

# WIZARD Sheep Manure



We can supply Wizard Brand Pulverized and Shredded Cow Manures.

# Superior Quality

For years Wizard has been conceded the standard of quality by the dealer trade. It is concentrated by a special direct heat process that kills all weed seeds. It is bone dry and packed in new, strong bags that reach your customers in perfect shape.

#### Dealer Service

A quick seller because it has been consistently advertised for twenty years. The free sales and advertising service to dealers insures increased sales and profits. It pays to handle this widely known, quick selling

Wizard Sheep Manure is packed in 2, 5, 10, 25, 50 and 100-pound bags.
Send for dealers proposition!

# The Pulverized Manure Co.

395 Union Stock Yards, Chicago



"I need three things to sell fertilizer in my community."
"What are they?"

"Package—Product—Price"

"We Have Them!"

#### SHEEP'S HEAD PACKAGE

is perfectly adapted to its purpose—attractive, symmetrical, artistic, strong. Bears directions for use of product, and analysis of content.

2-pounds, 5-pounds, 10-pounds

## Sheep's Head Pulverized Sheep Manure

contains in balanced ration the natural ingredients necessary to build up lawns, plants, flowers, shrubs, nursery stock. Its use can not be harmful to plant life. It is the perfect plant food.

Sheep's Head Price enables you to buy and sell at a splen-did profit, a product which gives marvelous value.

Inquiries Cordially Invited

#### NATURAL GUANO COMPANY Aurora, Illinois

Established 1903

Manufacturers also of Shredded Cattle Manure in 100-lb. Bags



#### GARDEN AND FIELD IMPLEMENTS AND SUPPLIES—Continued

Cultivators-Continued

New Beeman Garden Tractor Co., The

New Beeman Garden Tractor Co.,
Minneapolis, Minn.
Brinkly Hardy Co.
Louisville, Ky.
Brown Mfg. Co.
Zanesville, Ohio
Bruner Mfg. Co.
Ferndale, Mich.
Buffum Tool Co.
Louisiana, Mo.
Case Threshing Machine Co., J. I.
Racine, Wis.
Emerson-Brattingham Implement

Emerson-Brattingham Implement Co.

Rockford, Ill.
Empire Plow Co.
Cleveland, Ohio
Geyer Mfg. Co.
Rock Falls, Ill.

Gilson Co., J. E.
Port Washington, Wis.
Gilson Mfg. Co.
Port Washington, Wis.
Gravely Motor Plow & Cultivator Co.
Dunbar, W. Va.
Hayes Pump & Planter Co.
Galva, Ill.

Galva, Ill.
Hudson Mfg. Co.
Minneapolis, Minn.
(See Adv. Index Page 178)
Iron King Imp. Co.
Madison, Ohio
Leonard & Son, A. M.
Piqua, Ohio

Leroy, N. Y. Letz Mfg. Co. Crown Point, Ind. Motor Macultivator Co. Toledo, Ohio Norcross & Sons, C. S. Bushnell, Ill.

Ohio Cultivator Co. Ohio Cultivator Co.
Bellevue, Ohio
Red-E. Mfg. Co.
Milwaukee, Wis.
Schaible Mfg. Co.
Elyria, Ohio
Scott Co., I. W.
Pittsburgh, Pa.
Shaw Mfg. Co.
Galesburg, Kans.
Standard Garden Tool Co.
Montrose. Iowa

Montrose, Iowa Ulrich Mfg. Co. Rock Falls, Ill.

Utilitor Co., The Indianapolis, Ind. Wilbern Shared Forge Co. Rock Falls, Ill.

#### FANNING MILLS

Burch Corp. Crestline, Ohio Cleland Mfg. Co. Minneapolis, Minn. Dickey Mfg. Co., A. B.
Racine, Wis.
Ferrell & Co., A. T.
Saginaw, Mich.
Newkirk & Newkirk
Rushville, Ind. Owens Co., J. L. Minneapolis, Minn.

#### DRILLS

American Fork & Hoe Co. Cleveland, Ohio (See Adv. Index Page 178)

Bateman Co., Fred H. Philadelphia, Pa. Benthall Machine Co. Suffolk, Va.

Crown Mfg. Co.
Phelps, N. Y.
Hayes Pump & Planter Co. Galva, Ill. Iron King Imp. Madison, Ohio
Letz Mfg. Co.
Crown Point, Ind.
Standard Garden Tool Co. Montrose, Iowa

#### GARDEN HOSE

(See page 140)

#### GARDEN TRACTORS

American Farm Machine Co.
Minneapolis, Minn.

Dee & Ess Corp.
Cassadaga, N. Y.
(See Adv. Index Page 178)

Gilson Mfg. Co.
Port Washington, Wis.

Gravely Motor Plow & Cultivator Co.
Dunbar, W. Va.
Leroy Plow Co.
Leroy, N. Y.

Montague Mfg. Co.
Grand Rapids, Mich.
Northern Seed & Tractor Co.
Pittsburgh, Pa.
New Beeman Tractor Co., The
Minneapolis, Minn.
Pioneer Mfg. Co.

Pioneer Mfg. Co. Milwaukee, Wis. Milwaukee, Shaw Mfg. Co. Galesburg, Kans.
Standard Engine Co.
Minneapolis, Minn.
Utilator Co., The
Indianapolis, Ind.

#### GRINDERS—HAND

Arcade Mfg. Co. Freeport, Ill. Freeport, III.
Letz Mfg. Co.
Crown Point, Ind.
Red Chief Mfg. Co.
Louisville, Ky.
Sanders Mfg. Co., J. M.
Atlanta, Ga.

#### HARROWS

Henderson & Co., Peter New York, N. Y. (See Adv. Index Page 178)

#### HOES

American Fork & Hoe Company Cleveland, Ohio (See Adv. Index Page 178) Bateman Co., Fred H. Philadelphia, Pa.

Friladelpina, Pa.
Geyer Mfg. Co.
Rock Falls, Ill.
Gilson Co., J. E.
Port Washington, Wis.
Leonard & Son, A. M.
Piqua, Ohio

(See Adv. Index Page 178)
Piqua Handle Mfg. Co.
Piqua, Ohio
Reichard Mfg. Co., F. B.

Bangor, Pa.
Schoener Mfg. Co.
St. Cloud, Minn.

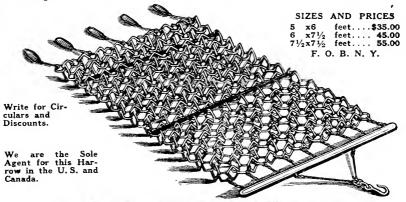
#### HORTICULTURAL TOOLS

Alliance Mfg. Co., The Alliance, Ohio American Fork & Hoe Co. Cleveland, Ohio (See Adv. Index Page 178)

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#### GARDEN AND FIELD IMPLEMENTS AND SUPPLIES—Continued

Horticultural Tools-Continued

Bartlett Mfg. Co.

Detroit, Mich.
(See Adv. Index Page 178)
de Cutlery Co.

Clyde Cutlery Co.
Clyde, Ohio
Disston & Sons
Philadelphia, Pa.

Philadelphia, Pa.
Hardie Mfg. Co.
Hudson, Mich.
Iron King Imp. Co.
Madison, Ohio
Leonard & Son, A. M.
Piqua, Ohio
(See Adv. Index Page 178)
McKinney Mfg. Co.
Pittsburgh, Pa.
Peck, Stow & Wilcox Co.
Southington. Conn.

Southington, Conn.

#### PLANT PROTECTORS

Calkins Machine Co. Spokane, Wash. Germain Seed & Plant Co.

Los Angeles, Calif. (See Adv. Index Page 178)

Harris Mfg. Co., A. W. Sleepy Eye, Minn. Plant Protector Co. Rochester, N. Y.

#### PLANT SETTERS

Masters Planter Co. Masters Planter Co.
Chicago, Ill.
Nagley Mfg. Co.
Lyons, N. Y.
Ohio Rake Co.
Dayton, Ohio
Potato Implement Co.
Traverse City, Mich.
Wabers Mfg. Co.
Racine, Wis.

#### PLANT SUPPORTS

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Igoe Bros.
Brooklyn, N. Y.
Leadclad Wire Co.
Moundsville, W. Va.
McHutchison & Co.
New York, N. Y.
(See Adv. Index Page 178)
Oriole Shop, The

LaGrange, Ill. Peerless Plant Stake Co., The

Peerless Plant Stake Co.
Waterloo, Iowa
Unadilla Silo Co.
Unadilla, N. Y.
United Steel & Wire Co.
Battle Creek, Mich.
Vaughan's Seed Store
Chicago, Ill.
Woodcraft Co., The
Dalton, N. Y.

#### PLANTERS

Allen & Co., Inc., S. L.
Philadelphia, Pa.
Iron King Implement Co.
Madison, Ohio
Wright Planters Co., The
Spokane, Wash.

#### PRUNING IMPLEMENTS

Alliance Mfg. Co., The Alliance, Ohio

Bartlett Mfg. Co. Detroit, Mich. (See Adv. Index Page 178)

Cronk & Carrier Mfg. Co.

Montour Falls, N. Y.
Disston & Sons, Inc., Henry
Philadelphia, Pa.
Crohem Co. Lab. H. Graham Co., Inc., John H.
New York, N. Y.
Nagley Mfg. Co.
Lyons, N. Y.
Northwest Fence & Wire Works Northwest Fence & Wire W Portland, Ore. Peck, Stow & Wilcox Co. Southington, Conn. Rhodes Mfg. Co. Grand Rapids, Mich. Seymour Smith & Son, Inc. Oakville, Conn. Trenton Patent Mfg. Co. Trenton, N. J. Wiss & Sons, J. Newark, N. J.

#### RAKES

Bateman Co., Fred H.
Philadelphia, Pa.
Cronk & Carrier Mfg.
Montour Falls, N. Leonard & Son, A. M. Piqua, Ohio (See Adv. Index Page 178) Ohio Rake Co. Dayton, Ohio Piqua Handle Mfg. Co. Piqua, Ohio Swineford Co., G. A. Canton, Ohio

#### SEED THRESHERS

Caledonia Bean Harvester Works Caledonia, N. Y. Caledonia, N. Y.
Case Threshing Machine Co., J. I.
Racine, Wis.
Gray's Sons, Inc., A. W.
Poultney, Vt.
International Harvester Co.
Chicago, Ill.
Koger Pea & Bean Thresher Co.
Morristown, Tenn. Morristown, Tenn. Owens Co., J. L. Minneapolis, Minn.

#### SEEDERS-DRILL

Bacon Mfg. Co Pontiac, Mich. Hudson Mfg. Co.
Minneapolis, Minn.
(See Adv. Index Page 178)

#### SEEDERS—BROADCAST

Bateman Co., Fred H. Philadelphia, Pa. Bohr, W. H. Westphalia, Mich. Crown Mfg. Co. Phelps, N. Y. Cyclone Seeder Co. Urbana, Ind. Gaunt & Son, Inc., J. R. New York, N. Y. Gilson Mfg. Co. Port Washington, Wis. Goodell Co. Antrim, N. H.
Letz Mfg. Co.
Crown Point, Ind. Pratt Mfg. Co., Wm. E. Chicago, Ill. Star Seeder Co. Shortsville, N. Y. Urbana Seeder Co. Urbana, Ind.



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Piqua, Ohio

(See Adv. Index Page 178) Wood Shovel & Tool Co.

Piqua, Ohio

#### SICKLES

Leonard & Son, A. M. Piqua, Ohio

(See Adv. Index Page 178)

Simmons Hardware Co. St. Louis, Mo.

#### SMUT TREATING MACHINES

Cleland Mfg. Co. Minneapolis, Minn.

Howes Co., S. Silver Creek, N. Y.

Seed Trade Reporting Bureau

Chicago, Ill.
(See Adv. Index Page 178)

#### SOIL SHREDDERS

Kemp Mfg. Co. Erie, Pa.

#### TOOLS—GARDEN

Allen & Co., Inc., S. L.
Philadelphia, Pa.
Alexander Mfg. Co.
Ames, Iowa

Alexander Mfg. Co.
Ames, Iowa
Alliance, Mfg. Co., The
Alliance, Ohio
American Fork & Hoe Co.
Cleveland, Ohio
(See Adv. Index Page 178)
Avery & Sons, B. F.
Louisville, Ky.
Bateman Co., Fred H.
Philadelphia, Pa.
Baystate Mfg. Co.
Worcester, Mass.
Dee & Ess Co.

Worcester, Mass.

Dee & Ess Co.
Cassadaga, N. Y.
(See Adv. Index Page 178)

Dobbins Mfg. Co.
North St. Paul, Minn.
(See Adv. Index Page 178)

Empire Plow Co.
Cleveland Obio

Cleveland, Ohio

Eureka Planter Co., Ltd.
Woodstock, Ont., Canada
Frost-Superior Fence Co.

Frost-Superior Fence Co. Warren, Ohio Gilson Co., J. E. Port Washington, Wis.

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Gilson Mfg. Co.
Port Washington, Wis.
Goodell Co.
Antrim, N. H.
Hazlett Mfg. Co.
Kearney, Neb.
Henderson & Co., Peter (Harrows)
New York, N. Y.
(See Adv. Index Page 178)

Hoeft & Co., Inc.

North Chicago, Ill. (See Adv. Index Page 178)

(See Adv. Index Page 178)

Hudson Mfg. Co.

Minneapolis, Minn.

(See Adv. Index Page 178)

Imperial Bit & Snap Co.

Racine, Wis.

Iron King Imp. Co.

Madison, Ohio

Johnson, The Firm of William

Newark, N. J.

Kingsbury Mfg. Co. (Trowels)

Keene, N. H.

Leonard & Son, A. M. Piqua, Ohio

(See Adv. Index Page 178) Metropolitan Material Co.

Brooklyn, N. Y.
Michigan Wire Goods Co.
Niles, Mich.

(See Adv. Index Page 178)
Nash, Inc., Duane H.
Millington, N. J.
Norcross & Sons, C. S.

Bushnell, Ill. Norris & Bell

Norris & Bell
Tauranga, New Zealand
Piqua Handle Mfg. Co.
Piqua, Ohio
Reichard Mfg. Co., F. B.
Bangor, Pa.
Schaible Mfg. Co.
Elyria, Ohio
Sabling Saedemon, Inc. May

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Schling Seedsmen, Inc., Max
New York, N. Y.
Schoener Mfg. Co.
St. Cloud, Minn.
Simmons Hdwe. Co.
St. Louis, Mo.

Swineford Co., G. A.
Canton, Ohio
Wood Shovel & Tool Co. Piqua, Ohio

#### TRACTORS

(Also see Garden Tractors, Page 130)

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Allis-Chalmers Mfg. Co.
Milwaukee, Wis.
Bates Machine & Tractor Co.

Joliet, Ill.
Bear Tractor, Inc.
New York, N. Y.

C. L. Best Tractor Co.
San Leandro, Calif.
The New Beeman Tractor Co.
Minneapolis, Minn.

Minneapolis, Minn.
Case Threshing Mach. Co., J. I.
Racine, Wis.
Cleveland Tractor Co.

Cleveland, Ohio

Dee & Ess Co.

Cassadaga, N. Y.
(See Adv. Index Page 178)

Deere Tractor Co., John Waterloo, Iowa Ford Motor Co. Detroit, Mich.

Gray Tractor Co., The
Minneapolis, Minn.
Gravely Motor Plow & Cultivator Co.
Dunbar, W. Va.
Hart-Parr Co.

Charles City, Ia.

Holt Mfg. Co. Stockton, Calif.

Huber Mfg. Co. Marion, Ohio

International Harvester Co. Chicago, Ill. Indiana Silo Co.

Anderson, Ind.

Kinnard & Sons Mfg. Co. Minneapolis, Minn.

LeRoy Plow Co.
LeRoy, N. Y.
LaCrosse Tractor Co.
LaCrosse, Wis.
Lawson Mfg. Co., John
New Holstein, Wis.

Minneapolis Threshing Mach. Co. Hopkins, Minn. Minneapolis Steel & Mach. Co. Minneapolis, Minn. Monarch Tractors Corp.

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It is the guarantee of the American Fork & Hoe Company (tool manufacturers for over 100 years) that each tool so marked is the best of its kind that can be made.

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Rock Island, Ill.
Rogers Tractor & Trailer Co.
Albion, Pa.
Russell & Co.
Massillon, Ohio
Scott Co., I. W.
Pittsburgh, Pa.
Shaw Tractor Co.
Galesburg, Kans.
The Toro Tractor Co.
Minneapolis, Minn.
Utilitor Co., The
Indianapolis, Ind.
Wetmore, H. A.
Sioux City, Iowa
Wisconsin Farm Tractor Co.
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Nagley Mfg. Co.
Lyons, N. Y.
New Idea Spreader Co.

Coldwater, Ohio
Wabers Mfg. Co.
Racine, Wis.
Wiard Plow Co.
Batavia, N. Y.

#### TROWELS

Cronk & Carrier Mfg. Co.
Montour Falls, N. Y.
Hoeft & Co., Inc.
N. Chicago, Ill.
(See Adv. Index Page 178)
Johnson, The Firm of William
Newark, N. J.
Leonard & Son, A. M.
Piqua, Ohio
(See Adv. Index Page 178)

(See Adv. Index Page 178)

#### WEEDERS

Barker Mfg. Co.
David City, Neb.
Bateman Co., Fred H.
Philadelphia, Pa. Bruner Mfg. Co., R. G. Ferndale, Mich. Gilson Co., J. E. Port Washington, Wis. Hazeltine, S. I. Springfield, Mo.

Hoeft & Co., Inc. North Chicago, Ill. (See Adv. Index Page 178) Hudson Mfg. Co.

Minneapolis, Minn.
(See Adv. Index Page 178)
Imperial Bit & Snap Co.
Racine, Wis.
Iron King Imp. Co.
Madison, Ohio Johnson-Sharp & Co. Bayfield, Wis.

Baylield, wis.
Leonard & Son, A. M.
Piqua, Ohio
(See Adv. Index Page 178)
Michigan Wire Goods Co.
Niles, Mich.
(See Adv. Index Page 178)
Norcross & Sons, C. S.
Rushnell. Ill. Bushnell, Ill. Reichard Mfg. Co Bangor, Pa. Co., F. B.

Simplex Company Seattle, Wash. Sowrite, Inc. New York, N. Y.

Ulrich Mfg. Co.
Rock Falls, Ill.
Western Brass Mfg. Works Chicago, Ill.

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Defiance Box Co., The
Defiance, Ohio

#### GREENHOUSE AND FLORAL SUPPLIES

FLORISTS' SUPPLIES Barnard Co., W. W. Chicago, III. (See Adv. Index Page 178)

(See Adv. Index Page 178)

Bird & Son

East Walpole, Mass.
(See Adv. Index Page 178)

Growell Pot Co., The (Flower Pots)

New York, N. Y.

Lewis, G. B.
Watertown, Wis.

Missouri Pottery & Mfg. Co.

Kansas City, Mo.

Randall Co., A. L.

Chicago, Ill.

Syracuse Pottery, Inc.

Syracuse, N. Y.

Uniform Products Co.

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#### FLOWER BOXES

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Sprauger & Johnson
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Syracuse, N. Y.
Venezia Garden Orn. Co.
(Concrete Boxes)
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Woodcraft Co., The
Dalton, N. Y.
Woodcraft Products Co.
Milford Ind. Milford, Ind.
Zane Pottery Co. (Pottery Boxes)
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Hooker Co., H. M.
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Brooklyn, N. Y.

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OR SPADE-TROWEL



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Forest Park, Ill.
Ickes-Braun Mill Co.
Chicago, Ill.
King Construction Co.

King Construction Co. North Tonawanda, N. Y.

North Tonawanda, N.
Lord & Burnham Co.
Chicago, Ill.
Metropolitan Material Co.
Brooklyn, N. Y.
Moninger & Co., John C.
Chicago, Ill.

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Dietsch Co., A.
Chicago, Ill.
Jacobs & Co., S.
Brooklyn, N. Y.
Metropolitan Material Co.
Brooklyn, N. Y.
Moninger & Co., John C.
Chicago, Ill.

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Dietsch Co., A.
Chicago, Ill.
Foley Greenhouse Mfg. Co.
Chicago, Ill.
Gordon-Van Tine Co.
Dayennort Lowe

Davenport, Iowa Jacobs & Co., S. Brooklyn, N. Y.

Brooklyn, N. Y.
Metropolitan Material Co.
Brooklyn, N. Y.
Moninger & Co., John C.
Chicago, Ill.

#### HOT BED SUPPLIES

Cleveland Buckram & Bag Co.

Cleveland Buckram & Bag Co.
Cleveland, Ohio
(See Adv. Index Page 178)
Dreer, Henry A.
Philadelphia, Pa.
Levine Bedding Co., David H. (Mats)
New Haven, Conn.
Metropolitan Material Co.
Brooklyn, N. Y.
Palmer Bros.

Palmer Bros.

New London, Conn. Uniform Products Co. Lancaster, Pa.

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Ball & Socket Mfg. Co. West Cheshire, Conn. Peerless Plant Stake Co., The Waterloo, Iowa

#### MOSS, SPHAGNUM

American Bulb Co.

Chicago, III.

(See Adv. Index Page 178)

Amundson Co., A. J.

City Point, Wis.

Vaughan's Seed Store
Chicago III Chicago, Ill.
Williamson, Garfield
New York, N. Y.

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Atkins & Durbrow, Inc.—(Horticultural) New York, N. Y.

Kier Peat Corp Morrison, Ill.

Loewith, Inc., Julius
New York City, N. Y.
(See Adv. Index Page 178)

(See Adv. Index Page 178)

McHutchison & Co.

New York, N. Y.

(See Adv. Index Page 178)

Pennrich & Co., Inc.

New York, N. Y.

U. S. Trading Co., Importers

Jacksonville, Fla.

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Chicago, Ill.

#### POTS—FLOWER

Bellevue Clay Products Co. Bellevue, Iowa

Bird & Son

East Walpole, Mass.
(See Adv. Index Page 178)
Central Fibre Co., Inc.
South Gardiner, Maine
Elverson Pottery Co., W. H.
New Brighton, Pa.
Findlay Clay Pot Co.
Findlay, Ohio
Growell Pot Co., Inc.
New York, N. Y.
Harris Mfg. Co., A. W.
Sleepy Eye, Minn.
Hews & Co., A. H.
Cambridge, Mass.
Hilfinger Bros.
Fort Edward, N. Y.
Ionia Pottery Co. Bird & Son

Ionia Pottery Co.

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Newark, N. J.

Neponset Co.
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Pittsburg Pottery Co.
Pittsburg, Kan.
Progressive Clay Co.
Philadelphia, Pa.
Red Wing Union Stoneware Co.
Red Wing, Minn.
Richmond Cedar Works (Cedar Tubs)
Richmond, Va.
Rochelle & Sons, F. W.

Richmond, Va.
Rochelle & Sons, F. W.
Chester, N. Y.
St. Louis Pottery & Mfg. Co.
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Springfield Clay Mfg. Co.
Springfield, Ohio

Syracuse Pottery Co.
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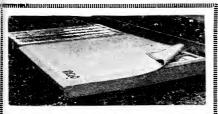
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(Waterproof)











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Ideal for transplanting and shipping



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Syracuse Pottery Co., Inc.
Syracuse, N. Y.
Zane Pottery Co.,
Zanesville, Ohio

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Kilgore Seed Co.
Plant City, Fla.
Loewith, Inc., Julius
New York City, N. Y.
(See Adv. Index Page 178)
McHutchison & Co.
New York City, N. Y.
(See Adv. Index Page 178)

Meehan Co., Thomas B. Dresher, Pa. Schoorl, Adrian J. San Francisco, Cal.

#### SEED AND PLANT FORCERS

American Fork & Hoe Co. Cleveland, Ohio (See Adv. Index Page 178)

Ball Mfg. Co. Glenside, Pa.

Brainard's Nurseries & Greenhouses, In-Des Moines, Iowa

#### TREE AND PLANT TUBS

Richmond Cedar Works Richmond, Va.

#### INOCULANTS AND PLANT FOODS

#### INOCULANTS

Dickinson Co., The A Chicago, Ill. Earp Laboratories Bloomfield, N. J. The Albert

Edwards Laboratory, The Lansing, Mich. (See Adv. Index Page 178) Farber Seed Co.

St. Joseph, Mo.
(See Adv. Index Page 178)
Franklin Laboratories, Inc.

Columbus, Ohio
Lockhart Laboratories
Atlanta, Ga.
McQueen Bacteria Co.

Baltic, Ohio

(See Adv. Index Page 178) Mulford Co., H. K.

Philadelphia, Pa-

Philadelphia, Pa.
(See Adv. Index Page 178)
Nitragin Co., The
Milwaukee, Wis.
(See Adv. Index Page 178)
Standard Inoculation Co.
Troy, Pa.
Standard Inoculation Co.
Glen Ridge, N. J.
Stimuplant Laboratories, Inc.
Long Island City, N. Y.
(See Adv. Index Page 178)

Long Island City, N. Y. (See Adv. Index Page 178) Uniform Products Co.

Lancaster, Pa. Urbana Laboratories

Urbana, Ill.

(See Adv. Index Page 178)
Western Legumo-germ Co.
Topeka, Kan.

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Darling & Co. Chicago, Ill.

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Hoover Laboratories, Inc.
Freeport, Ill.
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Magnesia Products Co.
Milwaukee, Wis.
National Plant Food Co.
Eau Claire, Wis.
Nitragin Co., The
Milwaukee, Wis.

Milwaukee, Wis. (See Adv. Index Page 178)

Plant Products Co.
Baltimore, Md.
(See Adv. Index Page 178)

Pulverized Manure Co.

Pulverized Manure Co.
Chicago, III.
(See Adv. Index Page 178)
Smith Agricultural Chemical Co.
Columbus, Ohio
Stadler Products Co.
Cleveland, Ohio
Stimuplant Laboratories, Inc.
Long Island City. N. Y.
(See Adv. Index Page 178)
Swift & Co.
Chicago, III.

Chicago, Ill.
(See Adv. Index Page 178)
Synthetic Nitrogen Products Corp.
New York, N. Y.
(See Adv. Index Page 178)
Temley Plant Food Co.
Cleveland, Ohio
Virginia Carolina Chem. Co.

Richmond, Va.
(See Adv. Index Page 178)
Williamson, Garfield
New York, N. Y.

## LAWN IMPLEMENTS AND SUPPLIES

#### GARDEN HOSE

Breeze Metal Hose & Mfg. Co. Newark, N. J.

Diamond Rubber Co., Inc. Akron, Ohio

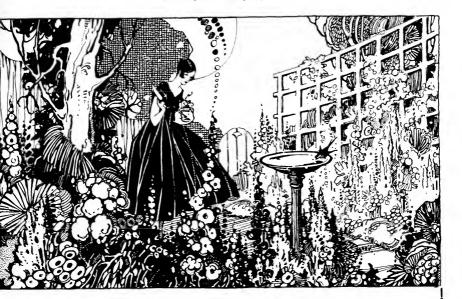
(See Adv. Index Page 178) Electric Hose & Rubber Co. Wilmington, Del.

Goodrich Rubber Co.

Akron, Ohio

Goodyear Rubber Co.
Akron, Ohio
Hayes Pump & Planter Co.
Galva, Ill.
Leonard & Son, A. M.
Piqua, Ohio
(See Adv. Index Page 178)
Metropolitan Material Co.
Brooklyn, N. Y.
Wilson Inc., Andrew
Springfield, N. J.

Springfield, N. J.
(See Adv. Index Page 178)



## Bigger Sales In 1929

DURING the past year, Bloomaid was offered to the public for the first time. Thousands tried it. Results were amazing. Within 30 days plants treated were almost double the size of those which had no Bloomaid. They bloomed 10 days to two weeks earlier. Expert greenhouse men were astonished at its effect on growth and bloom.

You can profit by cataloging and selling it in 1929 because

1st: It is the greatest aid yet produced for growing finer flowers, shrubs and vegetables.

2nd: Every user will get better results from your seed.

3rd: You can concentrate on one line without having to stock many, for Bloomaid comes in tablet, liquid and pulverized form.

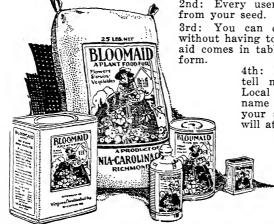
4th: National advertising will tell millions about Bloomaid. Local advertising over your name will focus the demand on your store. Beautiful posters will attract buyers.

> Write today for our proposition to seedsmen.

VIRGINIA - CAROLINA CHEMICAL CORP. Lawn & Garden Dept.

Richmond, Va.

Packed in boxes of 125 tablets, in liquid form, in 1 and 5 lb. cans and 25 and 100 lb. bags.



#### LAWN IMPLEMENTS AND SUPPLIES-Continued

#### HEDGE TRIMMERS

Cronk & Carrier Mfg. Co. Montour Falls, N. Y. Disston & Sons, Inc., Henry Philadelphia, Pa. Jaeger Prod. Co.
Trenton, N. J.
Leonard & Son, A. M.
Piqua, Ohio

(See Adv. Index Page 178) Trenton Patent Mfg. Co. Trenton, N. J.

#### HOSE CLAMPS

Allen Mfg. Co., W. D. Chicago, Ill.

#### HOSE MENDERS

Allen Mfg. Co., W. D. Chicago, Ill.

#### HOSE NOZZLES

Allen Mfg. Co., W. D. Chicago, Ill.

#### LAWN EDGE TRIMMERS

Allen & Co., Inc., S. L.
Philadelphia, Pa.
Ideal Mfg. Co.
Davenport, Iowa
Imperial Bit & Snap Co.
Racine, Wis.
Leonard & Son, A. M.
Piqua, Ohio
(See Adv. Index

(See Adv. Index Page 178) Miller & Sons Co. Waterloo, Iowa

#### LAWN FURNITURE AND DECORA-TIONS

American Thermo-Ware Co., Inc. (Gazing Globes)
v York, N. Y.
(See Adv. Index Page 178) New

Express Body Corp. Crystal Lake, I Hartman-Sanders Chicago, Ill. Homecraft Spec. Co. Mattoon, Ill.

Logan Co. Louisville, Ky.

Northwest Fence & Wire Works Portland, Ore.

Portland, Ore.
Randall Co., A. L.
Chicago, Ill.
Smith Iron & Wire Wks., F. P.
Chicago, Ill.
Syracuse Pottery, Inc.
Syracuse, N. Y.
Woodcraft Co., The
Dalton, N. Y.
Woodcraft Products Co.
Milford Ind. Milford, Ind.

#### LAWN GRASS SEED (See Page 105)

#### LAWN MOWER SHARPENERS

Berghman Co. Chicago, Ill.

#### LAWN MOWERS

American Lawn Mower Co.
Muncie, Ind.
Clarinda Mfg. Co.
Clarinda, Iowa.
Clipper Lawn Mower Co.
Dixon, Ill.

Coldwell Lawn Mower Co. Newburgh, N. Y. Cushman Motor Works Lincoln, Nebr. Eclipse Lawn Mower Co. Prophetstown, Ill. Elwood Lawn Mower Mfg. Co. Elwood Lawn Mower Mfg. Co.
Elwood, Ind.
Gilson Mfg. Co.
Port Washington, Wis.
Henley Lawn Mower Co.
Richmond, Ind.
Ideal Power Lawn Mower Co.
Lansing, Mich.
Jacobsen Mfg. Co.
Racine, Wis.
Milbradt Mfg. Co.
St. Louis, Mo.
Modern Machine Works (Power Mowers)
Milwaukee, Wis.

Milwaukee, Wis.
Moto-Mower Co.
Detroit, Mich.
Philadelphia Lawn Mower Co.

Philadelphia, Pa.
Philadelphia, Pa.
Red-E. Mfg. Co.
Milwaukee, Wis.
Rich Steel Prod. Co.
Battle Creek, Mich.
Roseman Tractor Mower Co.
Eventor III Evanston, Ill.

Stearns & Co., E. C.
Syracuse, N. Y.
Townsend & Co., S. P.
Orange, N. J.
Worthington Mower Co. Stroudsburg, Pa.

#### LAWN ROLLERS

Graham & Co., John H.
New York City, N. Y.
Leonard & Son, A. M.
Piqua, Ohio
(See Adv. Index Page 178)
Wilder-Strong Implement Co.
Monroe, Mich.

#### LAWN SPRINKLERS

LAWN SPRINKLE
Allen Mfg. Co., W. D.
Chicago, Ill.
Armstrong Mfg. Co.
Huntington, W. Va.
Dayton Irrigation Co.
Dayton, Ohio
Double Rotary Sprinkler Co.
Kansas City, Mo.
General Basic Products Co.
Seattle, Wash.
Hardware Supply Co.
Grand Rapids, Mich.
Imperial Bit & Snap Co.
Racine, Wis.
Leonard & Son, A. M.
Piqua, Ohio
(See Adv. Index Page

March Automatic Irrigation Co.
Muskegon, Mich.
Peck Bros. & Co.
New Haven, Conn.
Rainbow Sprinkler Co.

Jacksonville, Fla. Scollay, John A.

Brooklyn, N. Y.
Skinner Irrigation Co.

Skinner irrigation Co. Troy, Ohio Wilgus Mfg. Co. Los Angeles, Calif. X. L. Mfg. Co. Chicago, Ill.

#### LIME

International Agricultural Corp.
New York, N. Y.
Lavino & Co., E. J.
Philadelphia, Pa.
Marble Cliff Quarries Co. Columbus, Ohio

### **GAZING GLOBES**



Gazing Globes displayed on pedestals of your own manufacture bring a lot of new business.

ATCO Gazing Globes are made of white, heavy glass, and the silvering is put on so that it will last without blemish.

We have been importers of Gazing Globes for 18 years and carry stock of 8", 10", 12", 14", 16" and 18" sizes.

Write for Prices

American Thermo-Ware Co., Inc. 16 Warren St., New York, N. Y. 

## Do You Agree Dealer?



"Reef Brand is easy to handle. No waste. No broken bag. The elimination of dust makes Reef Brand 100% value both to the dealer and his trade."

Win friends for your store with Reef Brand. Increase your busi-ness and your profit. Everywhere poultrymen are demanding Reef Brand for their flock. Stock up with Reef Brand and answer every demand with a sale.

Pure Crushed Oyster Shell for Poultry~

GULF CRUSHING COMPANY

#### **GROZ-IT**" For Lawns and Gardens

Pulverized Sheep Manure

Many times as efficient as ordinary manure. Odorless, does not draw flies, easy to handle, guaranteed free from weed seeds and foreign matter—packed in 100-pound bags. For your lawns, gardens, window boxes, potted plants, golf greens, orchards, vineyards. It is good for anything that grows.

#### PACIFIC MANURE & FERTILIZER CO. MANUFACTURERS AND DISTRIBUTORS

429 Davis Street

San Francisco, Cal.

## The Peerless Hand Dust Gun



will make friends. Supply your trade with a real hand duster.

balanced-load divided front It is perfectly and rear.

amount of discharge can be regulated. is ball bearing and hub is packed in The Fan

Will dust two rows.

Will dust underneath the leaves. from strawberries to dust anything Willapples.

prices and mention this paper.

less Dust Gun Company

5100 St. Claire Ave. Cleveland, Ohio

#### LAWN IMPLEMENTS AND SUPPLIES-Concluded

Lime—Continued

Wilson, Inc., Andrew Springfield, N. J. (See Adv. Index Page 178)

#### MOLE AND ANIMAL TRAPS

Abington Trap Co. Abington, Ill.

Michigan Wire Goods Co. Niles, Mich.

(See Adv. Index Page 178) Roper Co., J. R. San Leandro, Calif.

#### RAKES—BAMBOO

American Import Co. San Francisco, Calif.

#### PETS AND PET SUPPLIES

#### BIRDS

Bishop, Henry, The Bird Man Baltimore, Md. Des Moines Bird Co., Inc. Des Moines, Iowa Hedwig's Pet Shop Scranton, Pa. Mussogs Bird Store Philadelphia, Pa. National Pet Shops

National Pet Shops St. Louis, Mo. Robison, Ansel W. San Francisco, Calif.

Schlagheck, Jos.
Toledo, Ohio
Schmeiser's Canary & Pet Plant
Buffalo, N. Y.
"Steins" Canary Plant

Philadelphia, Pa. Vahle, E. C. Chicago, Ill.

#### BIRD CAGES

Hendryx Co., Andrew B. New Haven, Conn.

Lindemann & Co., O.

New York, N. Y.

National Pet Shops
St. Louis, Mo.

Raedlein Basket Co.

Chicago, Ill.
Schlagheck, Jos.
Toledo, Ohio
Schoemann & Mayer
New York City, N. Y.
"Steins" Canary Plant Philadelphia, Pa.

#### BIRD CAGE STANDS-METAL

Lindemann & Co., O.
New York, N. Y.
Hendryx Co., Andrew B.
New Haven, Conn.
Woodcraft Products Co.
Milford Ird

Milford, Ind.

#### BIRD HOUSES

Burt Co., William D. Dalton, N. Y.

Crescent Co.

Toms River, P. O. N. J. (See Adv. Index Page 178) Dodson, Jos. H.

Dodson, Jos. H.

Kankakee, Ill.

Express Body Corp.

Crystal Lake, Ill.
Rieber Bird Homes

West Webster, N. Y.

Schaad & Son, E. J.

Merrill, Wis.

Schling Seedsmen, Inc., Max

New York, N. Y.

Woodcraft Co., The

Dalton, N. Y.

#### BIRD SEED AND SUPPLIES

American Seed & Food Products

American Seed & Fo Chicago, Ill. Bartels, Henry New York, N. Y. Burnet Co., Inc. Newark, N. J. Burt Co., W. D.

Dalton, N.

Curtin Company, George L. New York, N. Y.

Evans Bros.

Evans Bros.

Evanston, Ill.

Hinton & Co., Inc.

New York, N. Y.

Horton Co., Inc., F. T.

Hoboken, N. J.

Imperial Pet Shop

New York, N. Y.

Johnson, Inc., J. Oliver

Chicago, Ill.

Justrite Co., The

Milwaukee, Wis.

Magnesia Products Co.

Milwaukee, Wis.
Magnesia Products Co.
Milwaukee, Wis.
Miracus Bird Food Co.
Clifton Hill, Mo.
National Pet Shops
St. Louis, Mo.
Nature Friend, The
New York, N. Y.
Philadelphia Seed Co.
Philadelphia Pa.

Philadelphia, Pa.
(See Adv. Index Page 178)

(See Adv. Index Page 178)
Radwaner Seed Co., I. L.—(Bird Seed)
New York City, N. Y.
(See Adv. Index Page 178)
Rohleder, J. O.
Leipsig Entrits. sch., Germany
Scarlett & Co., Wm. G.—Bird Food
Baltimore, Md.
Schlagheck, Jos.
Toledo, Ohio
"Steins" Canary Plant
Philadelphia. Pa.

"Steins" Canary Plant
Philadelphia, Pa.
Von Damm, F. H.—Bit
Brooklyn, N. Y.

-Bird Food

#### DOG FOODS AND SUPPLIES

Bartels, Henry
New York, N. Y.
Battle Creek Dog Food Co.
Battle Creek, Mich.
(See Adv. Index Page 178)
Bennett Biscult Co., F. H.
New York City, N. Y.
Champion Animal Food Co.
Minneapolis, Minn.
Chappell Bros., Inc.
Rockford, Ill.
Glover Co., Inc., H. Clay

Chappell Bros., Inc.
Rockford, Ill.
Glover Co., Inc., H. Clay
New York, N. Y.
Good, Inc., James
Philadelphia, Pa.
Justrite Co., The
Milwaukee, Wis.
Imperial Biscuit Co.
Sackett's Harbor, N. Y.
Olding Food Corp., Dr.
New York, N. Y.
Peerless Dog Food Co.
Battle Creek, Mich.
Perfection Food Co.
Battle Creek, Mich.
Potter-Wrightington, Inc.
Boston, Mass.
Russell-Heckle Seed Co.
Memphis, Tenn.
Scott Co., I. W.
Pittsburgh, Pa.
Spratt's Patents, Ltd.
Newark, N. J.



## BUILD UP YOUR DOG FOOD SALES



## IILLER'S A 1 PRODUCTS

'Battle Creek Health Food for Dogs'

Seed Dealers everywhere are building a tremendous business on dog food foods.

Carry the line your custom-Dog Foods sold last year. Our National and direct mail advertising campaign will help you build a fast growing year round business.

#### FREE

A merchandising plan for ers are asking for, over 3,000,000 pounds of Miller's

A merchandising plan for Seed
Dealers will be sent free. This explains how you can clinch the dog
plains how you can clinch the dog food business in your city. for samples and particulars.



Battle Creek Dog Food Co.

Battle Creek, Michigan





**MOLE TRAPS** WIRE POTATO SCOOPS

## Popular Demand

Mr. Seed Store Owner-

Here are two splendid items for retail seed store distribution; they are specialties that fit in and find a ready sale with seed store patronage.

Mr. Catalog Seedsman-

You will be surprised by the large per cent of your orders that include these two standard items.

We furnish electros for listing. WRITE TODAY FOR DEALERS'
PRICES

**MICHIGAN** WIRE GOODS CO.

Second St., Niles, Mich.



#### PETS AND PET SUPPLIES-Continued

Dog Foods and Supplies-Continued

Wapler Co., Nicholas New York, N. Y. Wilson & Co., Inc. Chicago, Ill.

#### GOLD FISH AND SUPPLIES

American Seed & Food Products Co. Chicago, Ill. Ashbourne Goldfish & Supply Co.

-The Bird Man

Ashbourne Goldfish & Supply Burlington, Iowa
Auburndale Goldfish Co.
Chicago, Ill.
Bishop, Henry—The Bird Man
Baltimore, Md.
Bruce Fisheries
Thornburg, Iowa
Hanz, H. W.
New Braunfels, Texas
Heck, C. C. (Gold Fish Farm)
Greeley, Colo.
Justrite Co., The
Milwaukee, Wis.

Milwaukee, Wis.

Lakeview Ponds, The
Mt. Airy, Cincinnati, Ohio
Loveland Goldfish Farms

Loveland, Ohio Mussog's Bird Store Philadelphia, Pa.

Putnam's Fisheries Buffalo, N. Y. Schlagheck, Joseph Toledo, Ohio

Spring Lake Fishery
Waldron, Ind.
Tamms Silica Co. (Pebbles)

Chicago, Ill.
Vahle, E. C.
Chicago, Ill.
Wapler Co., Nicholas
New York, N. Y.

RABBITS

Summit Rabbitry Bernharts, Pa.

#### POULTRY SUPPLIES

#### BABY CHICKS

Acme Baby Chick Hatchery
Peoria, Ill.
Atz Hatchery Co.
Milltown, Ind.
Barr & Son, P.
Zeeland, Mich.
Berry's Poultry Farm
Clarinda, Iowa
Burt Co., W. D.
Dalton, N. Y.
Chick Hatchery, O. K.

Burt Co., W. D.
Dalton, N. Y.
Chick Hatchery, O. K.
Frenchtown, N. J.
Gilt Edge Poultry Ranch
Zeeland, Mich.
Hoosier Chick Hatchery
Indianapolis, Ind.
Illinois Hatchery
Metropolis, Ill.
Johnson Hatchery, Alf.
Leonardville, Kans.
Lakeview Poultry Farm
Holland, Mich.
Mary Maude Farms
Portland, Ind.
Meadow View Hatchery
St. Peter, Minn.
Miller Hatcheries
Lancaster, Mo.

Lancaster, Mo. Missouri Hatchery Bowling Green, Mo.

Nabob Hatcheries

Gambier, Ohio Sunshine Hatchery Corydon, Ind.

Van Wert Hatchery Van Wert, Ohio

#### BABY CHICK BOXES

Anderson Box Co.
Indianapolis, Ind.
Hinde & Dauch Paper Co.
Sandusky, Ohio
Keipper Cooping Co.
Milwaukee, Wis.

Sefton Mfg. Co. Chicago, Ill.

#### BROODERS

American Brooder Corp.

American Brooder Corp.
Alhambra, Calif.
(See Adv. Index Page 178)
Buckeye Incubator Co.
Springfield, Ohio
Buffalo Incubator Co.
Buffalo, N. Y.

Allen Mfg. Co., D. E.
Carthage, N. Y.
Bourbon Remedy Co.
Lexington, Ky.
C-A Wood Preserver Co.
St. Louis, Mo.
(See Adv. Index Page 178)
Carbolineum Wood Preserving Co.
Milwaukee, Wis.

Hoeft & Co., Inc.
North Chicago, III.
(See Adv. Index Page 178)
Liberty Marvel Co.
Philadelphia, Pa.
Miller Co., J. W.
Rockford, III.
Oakes Mfg. Co.
Tipton, Ind.
Ohio Rake Co.
Dayton, Ohio
Phelan Brooder Co.
Oklahoma City, Okla.
Queen Incubator Co.
Lincoln, Neb.
Quisenberry-Hobbs Co.
Kansas City, Mo.
(See Adv. Index Page 178)
Reliable Incubator & Brooder Co.
Quincy, III.

Quincy, Ill. Sheer, H. M.

Quincy, Ill. Simplex Brooder Stove Co.

Grand Rapids, Mich.
(See Adv. Index Page 178)
Thermo-Electric Co., Inc.
New Orleans, La.

#### BROODERS-STORAGE

Buckeye Incubator Co. Springfield, Ohio Miller-Ross Company Lancaster, Pa.

#### CARBOLINEUM

C-A Wood Preserver Co. St. Louis, Mo.

(See Adv. Index Page 178) Carbolineum Wood Preserving Co. Milwaukee, Wis.

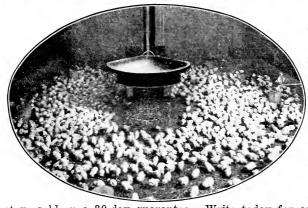
#### CHARCOAL-GROUND HARDWOOD

Gulf City Mfg. Co.
Mobile, Ala.
Tennessee Eastman Corp.
Kingsport, Tenn.

#### DISINFECTANTS

## SIMPLEX BROODER STOVE

#### GREATEST MOTHER OF THEM ALL



For 16 years the Simplex Brooder Stove has brooded chicks successfully for thousands of poultry men. oil burning stove with a smoke pipe that acts as a vent pipe — powerful direct oil burnerautomatic heat regulator plex Stoves save time, labor and bother -Every

stove sold on a 30-day guarantee. Write today for catalog and dealer's price list.

#### SIMPLEX BROODER STOVE CO.

5800 Ellsworth Ave. S. W.

Grand Rapids, Mich.

Sweet Smelling Rustic Cedar Bird



18 designs priced at

SEND \$3.00 FOR SAMPLES AND SPECIAL TERMS TO SEED STORES. Many Stores have found this a splendid side line. The Decoration Value in your Store can not be overlooked.

Crescent Co.

Toms River P. O., N. J.



## CARBOLINEUM

Applied by Spray or Brush

RECOMMENDED IN U. S. FARM BULLETINS 801 and 1070 to Kill Mites, Ticks and Blue Bugs

We have sold it for 40 years. Packed in cans and drums.

Write for prices.

C-A-WOOD PRESERVER CO.

6627 Delmar Blvd.

St. Louis, Mo.

#### POULTRY SUPPLIES-Continued

#### Disinfectants—Continued

Carbola Chemical Co.,
Long Island City, N. Y.
Chipman Chem. Engineering Co., Inc.
Bound Brook, N. J.
Conkey Co., G. E.
Cleveland, Ohio
Friedman Tobacco Products Corp
York, Pa.
Foost Insecticides
Arlington. Mass.

York, Pa.
Frost Insecticides
Arlington, Mass.
Gateway Chemical Co.
Kansas City, Mo.
General Basic Froducts Co.
Seattle, Wash.
General Laboratories
Madison, Wis.
Germo Mfg. Co.
St. Louis, Mo.
Good, Inc., James
Philadelphia, Pa.
LeGear Medicine Co., Dr. L. D.
St. Louis, Mo.
Modern Products Corp.
Chicago, Ill.
Pratt Food Co.
Philadelphia, Pa.
Quisenberry-Hobbs Co.
Kansas City, Mo.
(See Adv. Index Page 178)
Sherwin-Williams
Cleveland, Ohio

Cleveland, Ohio Tobacco By-Products and Chemical Corp.

Louisville, Ky.

(See Adv. Index Page 178)
Sterelac Co., The
North Chicago, Ill.

Wilson, Inc., Andrew Springfield, N. J. (See Adv. Index Page 178)

#### DRINKING FOUNTAINS

American Brooder Corp.

American Brooder Corp.
Alhambra, Calif.

(See Adv. Index Page 178)
Baier Bros. Mfg. Co.
Cissna Park, Ill.
Clarke Tank Co., J. Q.
Crawfordsville, Ind.
Hoeft & Co. Inc.
North Chicago, Ill.
(See Adv. Index Page 178)
Miller Co., J. W.
Rockford, Ill.
National Poultry Band Co.
Newport, Ky.
Oakes Mfg. Co.
Tipton, Ind.
Perfection Mfg. Co.
Monmouth, Ill.
Quisenberry-Hobbs Co.
Kansas City, Mo.
(See Adv. Index Page 178)
Reliable Inc. & Brooder Co.
Quincy, Ill.
Simplex Brooder Stove Co.
Grand Hapids, Mich.
(See Adv. Index Page 178)
Thompson & Sons, O. E.
Ypsilanti, Mich.

EGG CARTONS

#### EGG CARTONS

Gaylord, Inc., Robert St. Louis, Mo. Hinde & Dauch Paper Co.

Hinde & Dauch Paper Co.
Sandusky, Ohio

Hoeft & Co., Inc.
North Chicago, III.
(See Adv. Index Page 178)

Metal Egg Crate Co.
Fredericksburg, Va.

Safe-Service Egg Case Co.
Three Rivers, Mich.

Surety Egg Box Co.
Hohokus, N. J.

FEED-POULTRY

Ackerman Co., The Lima, Ohio

Lima, Unio
(See Adv. Index Page 178)
Albert Angell Jr. Co.
Chicago, Ill.
American Dry Milk Institute
Chicago, Ill. Chicago, Ill. American Milling Co.

American Milling Co.
Peoria, Ill.
Arcady Farms Milling Co.
Chicago, Ill.
Badenoch Co., J. J.
Chicago, Ill.
Bell's, Ltd.
Prince Albert, Saskatchewan
Blamberg Bros., Inc.
Baltimore, Md.
(See Adv. Index Page 178)
Burrell-Dugger Co.
Indianapolis, Ind.

Indianapolis, Ind. Chapin & Co. Chicago, Ill.

Chicago, III.
Collis Products Co. (Dried Buttermilk)
Clinton, Iowa
Conkey Co., G. E.
Cleveland, Ohio
Consolidated Products Co.
(Semi-Solid Buttermilk)

(Sem1-Soile Buttermilk)
Chicago, Ill.
Dacotah Seed Co.
Bismarck, N. D.
(See Adv. Index Page 178)
Darling & Co.

Chicago, Ill.

Dickinson Co., The Albert Chicago, Ill.

Douglas Co.

Cedar Rapids, Iowa

Edgar-Morgan Co.
Memphis, Tenn.
Edwards & Co., Inc., S. T.
(Dried Buttermilk and Dry Skim Milk) Chicago, Ill.

Harvey Seed Co.
Buffalo, N. Y.
(See Adv. Index Page 178)

Hardeman-King Co. Amarillo, Texas

Hales & Hunter Co. Chicago, Ill. Hecker, H-O Co., Inc. Buffalo, N. Y.

Jameson-Hevener Co. St. Paul, Minn.

St. Faul, Minn.
Ko-Vita Co. (Cod Liver Oil)
Bloomfield, N. J.
Krause Milling Co.
Milwaukee, Wis.

Magill & Co. (Operating Fargo Seed House) (Operating Fargo Seed House)
Fargo, N. D.
(See Adv. Index Page 178)
Marden Wild Corp. (Cod Liver Oil)
Somerville, Mass.
National Oil Products Co. (Cod Liver Oil)
Harrison, N. J.

Harrison, N. J.
Northrup, King & Co.
Minneapolis, Minn.
(See Adv. Index Page 178)
Northwestern Yeast Co.
Chicago, Ill.
Ouren Seed Co.
Council Bluffs, Iowa
(See Adv. Index Page 178)
Philadelphia Seed Co.
Philadelphia, Pa.
(See Adv. Index Page 178)
Pratt Food Co.
Philadelphia, Pa.
Quaker Oats Co.

Quaker Oats Co. Chicago, Ill.

Quisenberry-Hobbs Co. (Mineral) Kansas City, Mo. (See Adv. Index Page 178)



## OUGLAS ANNIA GERN

NEW LOW PRICES

% Active Ingredients

JEROME B. RICE SEED CO. HENRY A. DREER HENRY F. MITCHELL SEED CO. Philadelphia, Pa. D. LANDRETH SEED CO. J. D. LONG SEED CO. BOWMAN BROS. SEED CO. J. C. LEONARD SEED CO.

Detroit, Mich. Philadelphia, Pa. Bristol, Pa. Boulder, Colo. Concordia, Kan. Chicago, Ill.

The above representative Seed Firms and hundreds of others have used Annia Germ for years

**INCORPORATED 1916** 

### **Douglas Chemical & Supply Company**

825-827 South West Boulevard

Kansas City, Mo.

Sole Manufacturers and Distributors

#### POULTRY SUPPLIES-Continued

Feed-Poultry-Continued

Radwaner Seed Co., I. L.
New York City, N. Y.
(See Adv. Index Page 178)
Ralston Purina Co.
St. Louis, Mo.
Sanders Mfg. Co., J. M.
Atlanta, Ga.
Scarlett & Co., Wm. G.
Baltimore, Md.
Tioga Mill & Elevator Co.
Waverly, N. Y.
Ubiko Milling Co.
Cincinnati, Ohio
Universal Mills
Ft. Worth, Texas
Universal Mills
Chicago, Ill.
Washburn-Crosby Co.
Minneapolis, Minn.
Wells-Osen Milling Co.
Depere, Wis.
Wison & Co., Inc.
Chicago, Ill.
Wood & Son, T. W.
Richmond, Va.

#### FEED HOPPERS

American Brooder Corp.

Alhambra, Calif.

(See Adv. Index Page 178)
Baier Bros. Mfg. Co.
Cissna Park, Ill.
Hicks, H. W.
Huntington, Ind.

Hoeft & Co.

Hoeft & Co.
North Chicago, III.
(See Adv. Index Page 178)
Hornbeck, W. M.
Peoria, III.
Jacobus, M. R.
New York City, N. Y.
National Poultry Band Co.
Nawnort, Kv.

Newport, Ky.

Newport, Ky.
Oakes Mfg. Co.
Tipton, Ind.
Quisenberry-Hobbs Co.
Kansas City, Mo.
(See Adv. Index Page 178)
Thompson & Sons, O. E.
Ypsilanti, Mich.
Wasteless Feeder Co.
Sauk City, Wis.

#### GRIT

Georgia Mineral Products Co. Tate, Ga.
Limestone Products Corp. of America
Newton, N. J.
Louisiana Crushing Co.

Houma, La.

Ohio Marble Co. Piqua, Ohio Rockfield Products Co.

Milwaukee, Wis.

#### INCUBATORS

American Brooder Corp.

Alhambra, Calif. (See Adv. Index Page 178)

Automatic Incubator Co.
Delaware, Ohio
Buckeye Incubator Co.
Springfield, Ohio

Buffalo Incubator Co.
Buffalo, N. Y.
Des Moines Incubator Co.
Des Moines, Iowa

Hoeft & Company, Inc. North Chicago, Ill. (See Adv. Index Page 178)

Miller Co., J. W. Rockford, Ill. Oakes Mfg. Co. Tipton, Ind.

Prairie State Incubator Co.

Homer City, Pa. Queen Incubator Co.

Queen Incubator Co.
Lincoln, Neb.
Quisenberry-Hobbs Co.
Kansas City, Mo.
(See Adv. Index Page 178)
Reliable Incubator & Brooder Co.
Quincy, Ill.
Smith Incubator Co.
Cleveland, Ohio
Sure Hatch Incubator Co.
Fremont, Neb.
Thermo-Electric Co., Inc.
New Orleans. La. New Orleans, La.

#### LEG BANDS

Bayerdorfer, M.
Huguenot Park, N. Y.
Cadwallader Mfg. Co.
Salem, Ohio.

Cyclone Mfg. Co. Urbana, Ind.

Cyclone —
Urbana, Inc.

Hoeft & Co.
North Chicago, III.
(See Adv. Index Page 178)

Illinois Supply Co.
Aurora, III.
Miller Co., J. W.
Rockford, III.
National Poultry Band Co.
Newport, Ky.
Oakes Mfg. Co.

Oakes Mfg. Co.
Tipton, Ind.
Stiles, Charles L.
Columbus, Ohio

#### LICE KILLERS

Allaire, Woodward & Co.

Allaire, Woodward & Co.
Peoria, Ill.
Bourbon Remedy Co.
Lexington, Ky.
Burrell-Dugger Co.
Indianapolis, Ind.
C-A Wood Preserver Co.
St. Louis, Mo.
(See Adv. Index Page 178)
Carbolineum Wood Preserving Co.
Milwaukee, Wis.
Carbola Chemical Co.
Long Island City, N. Y.
Conkey Co., G. E.
Cleveland, Ohio
Germo Mfg. Co.
St. Louis, Mo.
Good, Inc., James
Philadelphia, Pa.
Klein-Lambert Co., The
Blue Island, Ill.
Lee Co., Geo. H.
Omaha, Neb.
LeGear Medicine Co., Dr. L. D.
St. Louis, Mo.
Modern Products Corp.
Chicago. Ill.

Modern Products Corp. Chicago, Ill.

National Poultry Band Co. Newport, Ky. Pratt Food Co.

Philadelphia, Pa.

Quisenberry-Hobbs Co.

Kansas City, Mo. (See Adv. Index Page 178) Reynolds Mfg. Co. Fredericktown, Ohio

Sherwin-Williams Co. Cleveland, Ohio

Uniform Products Co. Lancaster, Pa. son, Inc., Andrew Wilson, Inc.,

Springfield, N. J. (See Adv. Index Page 178)



FOR TWENTY YEARS

American Brooders have rendered honest and efficient service to thousands of satisfied users—

## THERE'S A REASON— ASK THE MAN WHO OWNS ONE

Made in a wide range of designs and sizes to meet every requirement.

Sold on a money-back guarantee. Prompt delivery to all points in United States and Canada guaranteed.

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#### POULTRY SUPPLIES-Continued

#### MARKING PUNCHES

Chicago, Ill.

Bayerdorfer, M.
Huguenot Park, N. Y.
Cyclone Mfg. Co.
Urbana, Ind.
Hoeft & Co., Inc.
North Chicago, Ill.
(See Adv. Index Page 178)
Illinois Supply Co.
Aurora, Ill.
Miller Co., J. W.
Rockford, Ill.
National Poultry Band Co.
Newport, Ky.
Reliable Incubator & Brooder Co.
Quincy, Ill. Quincy, Ill.

#### MEAT SCRAPS

Darling & Co.
Chicago, Ill.
Parmenter & Polsey Fertilizer Co.
Boston, Mass.
Stadler Products Co. Cleveland, Ohio son & Co., Inc. Wilson & Co., I Chicago, Ill. Swift & Co.

#### **NEST EGGS**

Hoeft & Co., Inc.
North Chicago, Ill.
(See Adv. Index Page 178)
Illinois Supply Co.
Aurora, Ill.
Opal Glass Co.
Fairmont, W. Va.
Reliable Incubator & Brooder Co.
Ouiney Ill. Quincy, Ill.
Reynolds Mfg. Co.
Fredericktown.
Wood & Son, T. W.
Richmond, Va.

#### OYSTER SHELLS

Gulf City Mfg. Co.
Mobile, Ala.
Gulf Crushing Co., Inc.
New Orleans, La.
(See Adv. Index Page 178) Louisiana Crushing Co.

Houma, La.
Mull Co., Leo B.
Cedar Rapids, Iowa
Peerless Oyster Co.
Baltimore, Md.

#### PIGEON SUPPLIES

Bayerdorfer, M. Huguenot Park, N. Y. Illinois Supply Co. Aurora, III. Scarlett & Co., Wm. G. Baltimore, Md.

#### POULTRY REMEDIES

Barnes Emulsion Co.
St. Louis, Mo.
Bee Dee Stock Medicine Co.
Chattanooga, Tenn.
Bourbon Remedy Co.
Lexington, Ky.
Burrell-Dugger Co.
Indianapolis, Ind.
Carbola Chemical Co.
Long Island City, N. Y.
Conkey Co., G. E.
Cleveland, Ohio
French Co., R. T.
Rochester, N. Y.
Germo Mfg. Co.
St. Louis, Mo.

Glover Co., Inc., H. Clay New York City, N. Y. Good, Inc., James Philadelphia, Pa. Illinois Supply Co. Aurora, Ill. Aurora, III.
Klein-Lambert Co.
Blue Island, III.
Lee Co., Geo. H.
Omana, Neb.
LeGear Medicine Co., Dr. L. D.
St. Louis, Mo.
Long Emulsion Co.
Terre Haute, Ind.
(See Adv. Index Page 178)
Modern Products Corp.
Chicago, III. Chicago, Ill.
Old Kentucky Mfg. Co.
Paducah, Ky. Pearson-Ferguson Co Kansas City, Mo. Kansas City, Mo.
Portland Seed Co.
Portland, Ore.
Pratt Food Co.
Philadelphia, Pa.
Quisenberry-Hobbs Co.
Kansas City, Mo.
(See Adv. Index Page 178)
Salsbury, Dr. J. E.
Charles City, Iowa
Supto Products Co.
Kansas City, Mo.
Tobacco By-Products and Chemical Corp.
Louisville, Ky.
(See Adv. Index Page 178)
Uniform Products Co.
Lancaster, Pa.
Vitone Mineral Co.
Lancaster, Ohio
Wight Company

Wight Company Lamoni, Ia.
Williamson, Garfield
New York, N. Y
Wood & Sons, T. W.
Richmond, Va.

#### POULTRY SUPPLIES

American Brooder Corp. Allambra, Calif.

(See Adv. Index Page 178)

Bernard Co., Phillip

Sioux City, Iowa

Better Products Co.

Burlington, Wis. Burlington, wis
Bowine Mfg. Co.
Melrose, Mass.
Brower Mfg. Co.
Quincy, Il.
Burnet Co., Inc.
Newark, N. J.
Burrell-Dugger Co.
Indianapolis. Ir Indianapolis, Ind. Cadwallader Mfg. Co. Salem, Ohio Salem, Ohio
Clarke Tank Co., J. Q.
Crawfordsville, Ind.
Conkey Co., G. E.
Cleveland, Ohio
Crowley Co., Inc., Geo. H
San Francisco, Calif.
Cyclone Mfg. Co.
Urbana, Ind.
Evapometer Company
Fargo, N. D.
Felker, C. H.
Boston, Mass.
Gaylord, Inc., Robert Gaylord, Inc., Robert
St. Louis, Mo.
Harvey Seed Co.
Buffalo, N. Y.
(See Adv. Index Page 178)

Hoeft & Co., Inc.

North Chicago, III. (See Adv. Index Page 178) Holser & Co., B. I. Walkerton, Ind.

# Your Customers Know \*\*Black Leaf 40\*\* A MICHAGUS BLATTER \*\*A MIC



Know "Black Leaf 40"

Growers and orchardists have

"Black Leaf 40" is packed in 10 lb. tins, 2 lb. tins and in ½ lb. bottles for commercial use and in oz. bottles for smaller flower and vegetable growers. Price list and information sent on request. Also electrotypes and advertising material for your use.

known and used "Black Leaf 40" for protecting their crops against destructive insects for nearly a quarter of a century; consequently the mere announcement that "Black Leaf 40" will control poultry lice is bound to make sales greatly increase. It will pay you to list "Black Leaf 40" in your seed catalogs and bulletins so that your customers are sure to know you handle it. We are advertising the various uses for "Black Leaf 40" to your customers, cash in on this substantial business that is waiting for you.





"Black Leaf 40"



#### POULTRY SUPPLIES—Concluded

#### POULTRY SUPPLIES-Continued

Illinois Supply Co.
Aurora, Ill.
Jacobus, M. R.
New York City, N. Y.
James Mfg. Co.
Ft. Atkinson, Wis.
Keipper Cooping Co.
Milwaukee, Wis. Keipper Cooping Co.

Milwaukee, Wis.
Klein-Lambert Co.

Blue Island, Ill.
Lee Co., Geo. H.
Omaha, Neb.
Liberty Marvel Co.
. Philadelphia, Pa.
Metcalf & Son, Inc.
Syracuse, N. Y.
Michigan Wire Goods Co.
Niles, Mich.
(See Adv. Index Page 178)
Miller Co., J. W.
Rockford, Ill.
Mit-Shel Stamping Mfg. Co.
Quincy, Ill.

Mit-Sner Stand -Quincy, Ill. National Poultry Band Co. Nawbort, Ky.

National Poultry Bar Newport, Ky. Oakes Mfg. Co. Tipton, Ind. Ohio Rake Co. Dayton, Ohio O. K. Co. New York, N. Y. Parke, Davis & Co. Detroit, Mich.

Pearson-Ferguson C
Kansas City, Mo.
Perfection Mfg. Co.
Monmouth, Ill.
Pratt Food Co.
Philadelphia, Pa.

Putnam, I.
Elmira, N. Y.
Quisenberry-Hobbs Co.

Kansas City, Mo. (See Adv. Index Page 178) Reliable Incubator & Brooder Co.

Quincy, III.

Rose Seed Co.
Clarksdale, Miss.
Scarlett & Co., Wm. G.
Baltimore, Md.

Scott Co., I. W., Pittsburgh, Pa Simplex Brooder Stove Co. Grand Rapids, Mich. (See Adv. Index Page 178) Smith-Conklin Co. Smith-Conklin Co.
Binghamton, N. Y.
Standard Chemical Mfg. Co.
Omaha, Neb.
Supto Products Co.
Kansas City, Mo.
Universal Products Sales Co.
New York, N. Y.
Thompson & Sons, O. E.
Ypsilanti, Mich.
Yon Damm. F. H.

Von Damm, F. H.
Brooklyn, N. Y.
Wood & Sons, T. W.
Richmond, Va.

#### SODIUM FLUORIDE

C-A Wood Preserver Co. St. Louis, Mo.
(See Adv. Index Page 178)
Carbolineum Wood Preserving Co. Wis. Milwaukee, Germo Mfg. Co. St. Louis, Mo.

#### TOBACCO POWDER

Uniform Products Co. Lancaster, Pa.

#### WORM MEDICINE

Germo Mfg. Co. St. Louis, Mo. Long Emulsion Co. Terre Haute, Ind. (See Adv. Index Page 178)

Merck & Co., Inc. Rahway, N. J. Pratt Food Co. Philadelphia, Pa.

Quisenberry-Hobbs Co. Kansas City, Mo. (See Adv. Index Page 178) Vitone Mineral Co. Lancaster, Pa.

#### SPRAYERS AND SPRAY MATERIALS

(Insecticides and Fungicides)

#### ANIMAL DIPS

Bourbon Remedy Co.
Lexington, Ky.
Carbola Chemical Co.
Long Island City, N. Y.
Chipman Chemical Engineering Co.
Bound Brook, N. J.
Conkey Co., G. E.
Cleveland, Ohio
Germo Mfg. Co.
St. Louis, Mo.
Good, Inc., James
Philadelphia, Pa.
Lee Co., Geo. H.

Philadelphia, Pa.
Lee Co., Geo. H.
Omaha, Neb.
LeGear Medicine Co., Dr. L. D.
St. Louis, Mo.
Lewis Co., G. B.
Watertown, Wis.
Pratt Food Co.
Philadelphia, Pa.
Quisenberry-Hobbs Co.
Kansas City, Mo.
(See Adv. Index Page 178)
Sherwin-Williams Co.
Cleveland, Ohio

Cleveland, Ohio Tobacco By-Products & Chem. Corp.

Louisville, Ky. (See Adv. Index Page 178)

Wilson, Inc., Andrew Springfield, N. J. (See Adv. Index Page 178)

#### CROW REPELLENTS

Cedar Hill Formula Co. New Britain, Conn.
Good, Inc., James
Philadelphia, Pa.
Scott Co., I. W. Pittsburgh, Pa.

#### DUSTERS

Bean Spray Pump Co.
Lansing, Mich.
Brown Co., E. C.
Rochester, N. Y.
(See Adv. Index Page 178)
California Sprayer Co.
Los Angeles Calif.
Dobbins Mfg. Co.
North St. Paul. Minn.
(See Adv. Index Page 178)
Dust Sprayer Mfg. Co.
Kansas City, Mo.
Eureka Planter Co., Ltd.
Woodstock, Ont., Cana
Feeny Manufacturing Co.
Muncie, Ind.

Muncie, Ind.

## These Nationally-Known Products of



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Trade Mark Registered

Recommended by the officers of the Garden Club of America.

## WILSON'S O. K. PLANT SPRAY A harmless, exceptionally effective insecticide for

A harmless, exceptionally effective insecticide for flowers, shrubs, evergreens, etc. Used by florists and estate superintendents everywhere.

16	pint														\$	0.40	
1	quart .															1.00	
1	gallon															3.00	
	gallons																
	gallons																
	gallon																
50	gallon	d	r	u	m	15									- (	90.00	

#### WILSON'S



Mix with water and sprinkle. One good application a year sufficient.

#### WILSON'S WEED KILLER

Kills all weeds, vines, poison ivy, etc. Easy to apply, inexpensive and clean.

l gal	on .					٠	٠		•				٠			٠	٠	. :	2.00
5 gal	lons																		8.00
10 gal																			
25 gall																			
50 gall																			
JU gan	OH C	 111	19	•	٠	٠	٠	•	۰	٠	٠	٠	٠	٠	٠	٠	•	•	30.00

## The same of the sa

Mixes easily in cold water—will not burn the hands or face.

#### WILSON'S SCALE-O

Scale-O, a dormant spray, will kill scale insects and eggs—also Aphis eggs, even in cold weather. Invaluable for the grower of fruit trees.

1	quart	cans.									\$	0.75
1	gallon	cans										2.00
5	gallon	cans										9.00
	gallon											
	gallon											
	gallon											

Send for discount sheets.



MANUFACTURERS OF

Insecticides—Fertilizers—Rhody-Life—Disinfectants

SPRINGFIELD

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**NEW JERSEY** 

#### SPRAYERS AND SPRAY MATERIALS-Continued

#### Dusters-Continued

Hardie Mfg. Co. Hudson, Mich. Houchin Co., Thos. W.
Jersey City, N. J.
Iron King Implement Co.
Madison, Ohio Levio, P. E. Vineland, N. J. Morse & Co., C. C.
San Francisco, Cal.
(See Adv. Index Page 178)

Niagara Sprayer Co. Middleport, N. Y.

Peerless Dust Gun Co.
Cleveland, Ohio
(See Adv. Index Page 178) Potato Implement Co. Traverse City, M Sherwin-Williams Co.

Cleveland, Ohio

Smith & Co., Inc., D. B. Utica, N. Y. (See Adv. Index Page 178)

Utility Sprayer Co. Minneapolis, Minn.

#### FLY REPELLENTS

Allaire, Woodward & Co. Peoria, Ill.
Allen Mfg. Co., H. I
Carthage, N. Y. Colonial Chemical Co. Reading, Pa.
Conkey Co., G. E.
Cleveland, Ohio Germo Mfg. Co St. Louis, Mo.
Good, Inc., James
Philadelphia, Pa.

LeGear Medicine Co., Dr. L. D. St. Louis, Mo.

Pratt Food Co. Philadelphia, Pa Quisenberry-Hobbs Co. Kansas City, Mo. (See Adv. Index Page 178)

Sherwin-Williams Co. Cleveland, Ohio

Smith & Co., Inc., D. B.
Utica, N. Y.
(See Adv. Index Page 178)
Tanglefoot Co., The
Grand Rapids, Mich.

Wilson, Inc., Andrew Springfield, N. J. (See Adv. Index Page 178)

#### **FUMIGANTS**

American Cyanamid Co. New York City, N. Y. Douglas Chemical & Supply Co. Kansas City, Mo. (See Adv. Index Page 178) Good, Inc., James Philadelphia, Pa. Interstate Chem. Co. Jersey City, N. J.

LeGear Medicine Co., Dr. L. D. St. Louis, Mo.

St. Louis, Mo.
Nicotine Mfg. Co.
St. Louis, Mo.
Perth Amboy Chemical Works
New York City, N. Y.
Quisenberry-Hobbs Co.
Kansas City, Mo.
(See Adv. Index Page 178)
Tobacco By-Products & Chem. Co.
Louisville, Ky.
(See Adv. Index Page 178)
Uniform Products CO.

Uniform Products Co. Lancaster, Pa.

#### FUNGICIDES

Acme White Lead & Color Works Detroit, Mich. American Cyanamid Co. New York City, N. Y.

New York City, N. Y.
Aphine Mfg. Co.
Madison, N. J.
Bawker Chemical Co.
New York City, N. Y.
Bayer-Semesan Co., Inc. (Disinfectants)
New York, N. Y.
(See Adv. Index Page 178)
Carbola Chemical Co.
Long Island City, N. Y.
Chipman Chem. Engineer Co.
Bound Brook, N. J.
Devoe & Reynolds Co.

Devoe & Reynolds Co. Chicago, Ill.

General Chemical Co. New York, N. Y. Good, Inc., James Philadelphia, Pa

Grasselli Chemical Co. Cleveland, Ohio

Cleveland, Ohio
Hammonds Paint & Slug Shot Works
Beacon, N. Y.
Interstate Chemical Co.
Jersey City, N. J.
Leggatt & Bro., Inc.
% Interstate Chemical Co.
Jersey City, N. J.
Nitrate Agencies Co.
Bayone N. J.

Nitrate Agencies Co.
Bayonne, N. J.
Pratt Co., B. G.
New York City, N. Y.
Sherwin-Williams Co.
Cleveland, Ohio
Stumpp & Walter Co.
New York City, N. Y.
(See Adv. Index Page 178)
Wilson, Inc., Andrew

Wilson, Inc., Andrew Springfield, N. J. (See Adv. Index Page 178)

#### INSECTICIDES

The following firms manufacture only plant insecticides except where otherwise noted:

Acme White Lead & Color Works Detroit, Mich. American Cyanamid Co. New York City, N. Y.

Ansbacher Insecticide Co. New York City, N. Y.

Aphine Mfg. Co. Madison, N. J.

Blaauw, John Tacoma, Wash.
Bon Arbor Chemical Co.
Paterson, N. J.
Botanical Mfg. Co.

Philadelphia, Pa.

Boundary Chemical Co. Liverpool, England

Bourbon Remedy Co. (also animal) Lexington, Ky.

Bowker Insecticide Co. Baltimore, Md.

Calif. Spray-Chemical Co.
New York City, N. Y.
(See Adv. Index Page 178)

C-A Wood Preserver Co. (Animal)

St. Louis, Mo.
(See Adv. Index Page 178)
Carbola Chemical Co. (Animal)
Long Island City, N. Y.
Carbolineum Wood Preserving Co.

(Animal) Milwaukee, Wis. Carco Spray Co., Inc. Tacoma, Wash.

Chipman Chemical Engineering Co. Bound Brook, N. J.





Every seed customer you have is a customer for Du Bay Seed Disinfectants as well. Why? Because there yet exists no practical means of knowing whether or not dangerous fungous diseases exist on the seed. Farmers, market gardeners, florists and amateurs are turning to seed disinfectants as a cheap, effective form of disease insurance. Sell them seed disinfectants when you sell them seeds.

## SEED DISINFECTANTS

#### Sales Aids

Extensive advertising campaigns in state and national farm publications reach practically every prospect in the sections which grow 97% of all the oats; 94% of all the barley; 74% of all the corn and 78% of all the potatoes grown in the U. S.

Free Illustrated Booklets
Catalog Copy
Newspaper Electros
Moving Pictures
Movie Slides
Window Displays
Sales Letters
Sales Information Bulletins
Radio Talks

Ceresan offers unlimited possibilities since its use as an easily applied dust is effective against the smuts of wheat, oats, barley, rye and sorghum, diseases which cause millions of dollars' loss.

Semesan Jr. is used by farmers as an effective means of protecting seed corn from rotting in the ground. It controls corn root rot diseases and generally increases yields, at an acre cost of only  $2\frac{1}{2}c$ .

Semesan Bel offers potato growers ease of application by instantaneous dip treatment, freedom from injury to the seed piece, protection against seedborne diseases, and generally increased yields.

Semesan costs only 1/4c to 1c per pound of flower and vegetable seed and may be applied in dust or liquid form.

Nu-Green is a combination disinfectant and stimulator for the Brown Patch disease of golf greens. Write for full details of this profitable side line:

BAYER-SEMESAN Co., INC. 105 Hudson Street New York, N. Y.

#### SPRAYERS AND SPRAY MATERIALS-Continued

#### INSECTICIDES—Continued

G. E. Conkey Co. (Animal)
Cleveland, Ohio
Cook & Co., Geo. C.
New York City, N. Y.
Daigger & Co., A.
Chicago, Ill.
Devoe & Reynolds
Chicago, Ill.

Chicago, Ill.

Douglas Chemical & Supply Co. Kansas City, Mo. (See Adv. Index Page 178)

Dow Chemical Co. Midland, Mich. Enoz Chemical Co.

Midland, Mich.
Enoz Chemical Co.
Chicago, Ill.
Felix-Girard Co., Inc.
Minneapolis, Minn.
Fertall Co.
Newark, N. J.
Friedman Tobacco Products Corp.
York, Pa.
Garden Chemical Co.
New York City, N. Y.
General Basic Products Co.
Seattle, Wash.
General Chemical Co.
New York City, N. Y.
Glidden Co., The
Cleveland, Ohio
Golden State Milk Products Co.
San Francisco, Calif.
Golden States Sales Corp.
New York, N. Y.
Good, Inc., James
Philadelphia, Pa.
Grasselli Chemical Co.
Cleveland, Ohio
Hammond's Paint & Slug Shot Works
Beacon, N. Y.
Hempstead, Earl L.
Bloomington, Ill.

Bloomington, Ill.
Home Products, Inc.
Rahway, N. J.
Horn Co., A. C.
Long Island City, N. Y. Interstate Chemical Co. Jersey City, N. J. Keeling & Walker, Ltd. London, England

Klein-Lambert Co. (Also Animal)
Blue Island, Ill.
LeGear Medicine Co., Dr. L. D. (Animal)
St. Louis, Mo.

St. Louis, Mo.
Leggatt & Bro., Inc.
% Interstate Chemical Co.
Jersey City, N. J.
Lemon Oil Co.
Baltimore, Md.
McCormick & Co., Inc.
Baltimore, Md.
(See Adv. Index Page 178)
McLaughlin Gormley King & Co.
Minacapalis, Min

Minneapolis, Minn. (See Adv. Index Page 178)

Modern Products Corp. Chicago, Ill. National Plant Food Co. Eau Claire, Wis.

Eau Claire, Wis.
Niagara Sprayer Co.
Middleport, N. Y.
Nico Dust Mfg. Co.
Los Angeles, Calif.
Nicotine Mfg. Co.
St. Louis, Mo.
Nitrate Agencies Co.
Bayonne, N. J.
Perfection Chemical Co.
Flushing, N. Y.

Perfection Chemical Co. Flushing, N. Y.
Perth Amboy Chemical Works
New York City, N. Y.
Potash-Marl, Inc.
New York City, N. Y.
Powell & Co., Inc., John
New York City, N. Y.

Pratt Co., B. G.
New York City, N. Y.
Pratt Food Co. (Animal)
Philadelphia, Pa.
Quisenberry-Hobbs Co.
Kansas City, Mo.
(See Adv. Index Page 178)
Rice, J. H.
Ashtabula, Ohio
Shenard Laboratories

**Shepard Laboratories** 

Council Bluffs, Iowa
(See Adv. Index Page 178)
Sherwin-Williams Co.

Cleveland, Ohio
Smith & Co., Inc., D. B.
Utica, N. Y.
(See Adv. Index Page 178)
Sporicide Chemical Co.

Atlanta, N. Y.

Stanley Jordan & Co. New York City, N. Y. (See Adv. Index Page 178)

Sunset Sales Co. Tacoma, Wash.

Tobacco By-Products & Chemical Corp. Louisville, Ky. (Also Animal) (See Adv. Index Page 178)

Uniform Products Co. (Also Animal) Lancaster, Pa.

Vigor Co.

Fostoria, Ohio Virginia-Carolina Chemical Corp. Richmond, Va. (See Adv. Index Page 178)

Wilson, Inc., Andrew Springfield, N. J. (See Adv. Index Page 178)

#### MOTH KILLERS

Allaire, Woodward & Co. Peoria, Ill.

Douglas Chemical & Supply Co. Kansas City, Mo. (See Adv. Index Page 178)

Enoz Chemical Co.

Chicago, Ill.
Gateway Chemical Co. Gateway Chemical Co.
Kansas City, Mo.
Good, Inc., James
Philadelphia, Pa.
Home Products, Inc.
Rahway, N. J.
Taylor Chemical Co.
New York City, N. Y.
Wilson, Inc., Andrew

Wilson, Inc., Andrew Springfield, N. J. (See Adv. Index Page 178)

#### PEST EXTERMINATORS (Rats, Etc.)

Allen Mfg. Co., Inc., H. E. Carthage, N. Y.

Cartnage, N. Y.
American Cyanamid Co.
New York City, N. Y.
Automatic Trap Co.
Chicago, Ill.
Bon Arbor Chemical Co.
Paterson, N. J.
Botanical Mfg. Co.
Philadelphia Pa.

Philadelphia, Pa.
Carbola Chemical Co.
Long Island City, N. Y.
Chipman Chem. Engineering Co.
Bound Brook, N. J.
Douglas Chemical & Supply Co.

Kansas City, Mo. (See Adv. Index Page 178)

Dugan, Herbert F. San Francisco, Calif.

Enoz Chemical Co.
Chicago, Ill.
Felix, Girard & Co., Inc.
Minneapolis, Minn.



## meets the demand for:—

- —a sure, quick killer of plant insects—both chewing and sucking varieties;
- —a safe insecticide . . . harmless to man, animals, birds and plants;
- -pleasant to use, no disagreeable odors;
- -economical—dilutes 1 to 800 for aphis.

Nationally advertised; sales growing by leaps and bounds; a liberal profit margin for dealers. Write for our proposition.

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No dealer can afford to be without

#### RED ARROW INSECT SPRAY BEE BRAND INSECT POWDER

Non-poisonous — Odorless — Non-inflammable — Non-staining

Nearest perfection in war against insects affecting

Flower and Vegetable Garden Truck Crop Greenhouses

Small Fruits Orchards Ornamentals Home
Kennel Dairy and Stock Farms Poultry House

Literature, Sample, Testimonials and Quotations on Application

McCORMICK & CO., INC., Manufacturing Chemists Pioneers in Pyrethrum Products

BALTIMORE

MARYLAND

#### SAVE TIME AND MONEY

by using these seed germination pads. They can conveniently be used in any make of machine. The size of the pads are 3x3", each having 100 indentations.

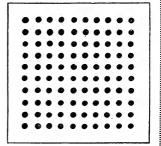
Why Count the Seeds?

The indentations of these pads are correct for average size seeds such as Red Clover and all seeds of similar size. If it is desirable to have a blotter pad on top, they can be used to advantage in that way. Orders for thousands of these pads have already been received.

#### They are JEEDBURD Quality

The cost is reasonable. Samples and prices on request.

The Seed Trade Reporting Bureau 1018 S. Wabash Ave., Chicago



#### SPRAYERS AND SPRAY MATERIALS-Continued

Pest Exterminators-Continued

Good, Inc., Jas.

Philadelphia, Pa. Medicine Co., Dr. L. D.

LeGear Medicine
St. Louis, Mo.
Merchants Drug C
Easton, Md. Co.

Modern Products Corporation

Chicago, Ill.

Quisenberry-Hobbs Co.

Kansas City, Mo.

(See Adv. Index Page 178)

Rat Bis-Kit Co.

Springfield, Ohio

Reardon Laboratories, Inc., W. G.
Port Chester, N. Y.
(See Adv. Index Page 178)
Stearns' Electric Paste

Stearns' Electric Paste
Chicago, III.
Stimuplant Laboratories, Inc.
Long Island City, N. Y.
(See Adv. Index Page 178)
Tanglefoot Co., The
Grand Rapids, Mich.
Virus, Ltd., R. R.
New York City, N. Y.
Wilson, Inc., Andrew
Springfield, N. J.
(See Adv. Index Page 178)

(See Adv. Index Page 178) X-Termo Products, Inc.

Milwaukee, Wis.

#### SEED DISINFECTANTS

Bayer-Semesan Co., Inc.

New York, N. Y. (See Adv. Index Page 178)

#### SPRAYERS

Alliance Mfg. Co., The Alliance, Ohio

Alliance, Ohio
Armstrong Mfg. Co.
Huntington, W. Va.
Barnes Mfg. Co.
Mansfield, Ohio
Bateman Co., Fred H.
Philadelphia, Pa.
Bean Spray Pump Co.
Lansing, Mich.
Brower Mfg. Co.
Quincy, Ill.
Brown Co., E. C.
Rochester, N. Y.
(See Adv. Index Page 178)
Campbell-Hausfeld Co., The
Harrison, Ohio
Cincinnati Screw Co.
Cincinnati, Ohio
Crown Mfg. Co.
Phelps, N. Y.
Deming Co.
Selem Ohio

Deming Co.

Salem, Ohio
Dobbins Mfg. Co., The
N. St. Paul, Minn.
(See Adv. Index Page 178)

Eureka Mower Co. Utica, N. Y. Feeny Mfg. Co. Muncie, Ind.

Muncie, Ind.
Field Force Pump Co.
Elmira, N. Y.
Friend Mfg. Co.
Gasport, N. Y.
Goulds Mfg. Co.
Seneca Falls, N. Y.
Hardie Mfg. Co.
Hudson, Mich.
Haves Pump & Planter

Hayes Pump & Planter Co. Hoeft & Co., Inc. North Chicago, Ill.

(See Adv. Index Page 178) va, Ill. Galva,

(See Adv. Index Page 178)
Galva, Ill.

Hudson Mfg. Co.
 Minneapolis, Minn.
 (See Adv. Index Page 178)

Humphreys Mfg. Co.
 Mansfield, Ohio

Iron King Implement Co.
 Madison, Ohio
I.enox Misty Sprayer Mfg. Co., The
 New York, N. Y.

Morrill & Morley Mfg. Co.
 Benton Harbor, Mich.

Myers & Bro. Co., The F. E.
 Ashland, Ohio
 (See Adv. Index Page 178)

Niagara Sprayer Co.
 Middleport, N. Y.

Peerless Dust Gun Co.
 Cleveland, Ohio
 (See Adv. Index Page 178)

Potato Implement Co.
 Traverse City, Mich.

Smith & Co., D. B.
 Utica, N. Y.

(See Adv. Index Page 178)

(See Adv. Index Page 178) Utility Sprayer Co.
Minneapolis, Minn.

#### WEED DESTROYERS

Atlas Preservative Co.
New York City, N. Y.
Bentley, Ltd., Jos.
Hull, England
Bon Arbor Chemical Co.
Paterson, N. J.
Boundary Chemical Co.
Liverpool, England
Chipman Chemical Engineering Co., Inc.
Bound Brook, N. J.
Good, Inc., James
Philadelphia, Pa.
Interstate Chem. Co.
Jersey City, N. J.
Milwaukee Paper Pulley Works
Milwaukee, Wis. Milwaukee, Wis.

Sowrite, Inc. New York, N. Y. Wilson, Inc., Andrew

Springfield, N. J. (See Adv. Index Page 178)

#### STOCK FOODS AND REMEDIES

#### STOCK FOODS

American Dry Milk Institute Chicago, Ill. American Milling Co.

American Milling Co.
Peoria, Ill.
Blatchford Calf Meal Co.
Waukegan, Ill.
Casco Milling Co.
Omaha, Neb.
Clover Leaf Milling Co.
Buffalo, N. Y.
Conkey Co., The G. E.
Cleveland, Ohio
Corn Products Refining Co.
New York, N. Y.

Curtin Company, George L. New York, N. Y. Dacotah Seed Co.

Bismarck, N. D. (See Adv. Index Page 178)

Dairymen's Ass'n Lyndon, Vt.

Douglas Co. Cedar Rapids, Ia. Hales & Hunter Co. Chicago, Ill.

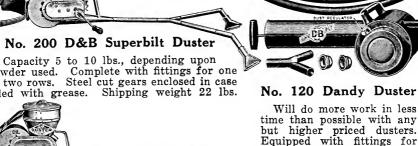
Hardeman-King Co. Amarillo, Texas

International Sugar Feed Co. Minneapolis, Minn.

### D & B SUPERBILT SPRAYERS AND DUSTERS



powder used. Complete with fittings for one or two rows. Steel cut gears enclosed in case filled with grease. Shipping weight 22 lbs.



#### No. 100 D&B Superbilt Duster

Of same general construction as No. 200. Capacity 3 to 6 lbs., depending on powder used. Equipped for one or two rows. Shipping weight 14½ lbs.



Equipped with 24 inches of extension and angle nozzle. Packed one dozen to the carton. Shipping weight 16½ lbs.

many varied operations. Packed two to the carton. Shipping weight 8 lbs.



Superbilt Sprayer

No. 399G-Galv. Tank. No. 399B-Brass Tank. Capacity 4 gallons. Shipping weight 12 lbs. Includes 24" Brass Extension and Universal Nozzle.



Rival Sprayer

No. 288G—Galv. Tank. No. 288B—Brass Tank. Capacity 3½ gallons. Shipping weight 10 lbs. Includes 20" Extension.



Capacity 2 gals. Shipping weight 7 lbs. Includes

20" Extension.

## THE DOBBINS MFG. CO.

NORTH ST. PAUL, MINN.

#### STOCK FOODS AND REMEDIES

Stock foods-Continued

Nowak Milling Corporation Buffalo, N. Y. Peters Mill Co., M. C. Omaha, Neb. Pratt Food Co. Philadelphia, Pa.

Quaker Oats Co. Chicago, Ill.

Chicago, Ill.
Ralston Purina Co.
St. Louis, Mo.
Security Calf Food Co.
Minneapolis, Minn.
Steel Co., The F. R.
Chicago, Ill.
Universal Products Sales Co.
New York, N. Y.
Vitality Mills
Chicago, Ill.
Ubiko Milling Co.

Ubiko Milling Co.
Cincinnati, Ohio

Wilson & Co., Chicago, Ill. Inc.

STOCK REMEDIES

Bee Dee Stock Medicine Co. Chattanooga, Tenn. Bourbon Remedy Co. Lexington, Ky. Carbola Chemical Co.

Long Island City, N. Y.

Carey Salt Co.

Hutchinson, Kan.
Conkey, Co., The G. E.
Cleveland, Ohio
Dairymen's Ass'n
Lyndon, Vt.

Feil Mfg. Co. Cleveland, Ohio Fleming Bros., Chemists Chicago, Ill.

Glover Co., Inc., H. Clay New York, N. Y. Hess & Clark, Dr. Ashland, Ohio

Lee Co., Geo. H.
Omaha, Neb.
LeGear Medicine Co., Dr. L. D.
St. Louis, Mo.
Magic Food Co.

Chattanooga, Tenn. Modern Products Corp.

Chicago, Ill.

Pratt Food Co. Philadelphia, Pa. Sherwin-Williams Cleveland, Ohio

Standard Chemical Mfg. Co. Omaha, Neb.

Uniform Products Co. Lancaster, Pa.

#### MISCELLANEOUS SIDE LINES

#### ADVERTISING SPECIALTIES-WOOD

Root Co., A. I. Medina, Ohio

#### BEE SUPPLIES

Bell's, Ltd.
Prince Albert, Saskatchewan
Dadant & Sons
Hamilton, Ill.
Kilgore Seed Co.
Plant City, Fla.
Lewis Co., G. B.
Watertown, Wis.
Root Co., A. I. Bell's, Ltd. Root Co., A. I.

Medina. Ohio
Scott Co., I. W.
Pittsburgh, Pa.

#### BOOKS ON FARMING AND GARDENING

DeLaMare Co., Inc., A. T.
New York City, N. Y.
Doubleday, Page & Co.
Garden City, N. Y.
Lippincott Co., J. B.
Philadelphia, Pa.
Little, Brown & Co.
Boston, Mass.
MacMillan Co., The
New York City, N. Y.
Orange Judd Publ. Co., Ir
New York City, N. Y.
Webb Publishing Co.
St. Paul, Minn. Inc. St. Paul, Minn.

#### BOWLS-BULB

Hews & Co., Inc., A. H. Syracuse, N. Y. Paducah Pottery Co. Paducah, Ky.
Roseville Pottery Co.
Zanesville, Ohio Syracuse Pottery, Inc. Syracuse, N. Y.

Zane Pottery Co. So. Zanesville, Ohio

#### FLOWERS-ARTIFICIAL

Adler-Jones Co Chicago, Ill.

#### FEATHER FLOWERS

**DeWitt Sisters** Battle Creek, Mich.

#### GLOBES (GAZING)

American Thermo-Ware Co., Inc. New York, N. Y. (See Adv. Index Page 178)

#### HANGING BASKETS

Hews & Co., Inc., 7 Syracuse, N.
Miller & Doing
Brooklyn, N. Raedlein Basket Co. Chicago, Ill.
Savo Mfg. Co.
Chicago, Ill.
Syracuse Pottery, I
Syracuse, N. Y. Inc.

#### MUSHROOM SPAWN

American Spawn Co. St. Paul, Minn.
Michell Co., Henry F.
Philadelphia, Pa.
Niles Mushroom Co.
Niles, Mich.

#### NOVELTIES

N. Shure Company Chicago, Ill.

#### SOIL TESTERS

Dickinson Co., The Albert Chicago, Ill. Earp Laboratories Bloomfield, N. J.



## COTTON BAGS

**ALL TYPES** 

We have very attractive prices to offer. Kindly write for our prices and samples.

#### MAIN OFFICE

AMES BAG MACHINE CO.

1991 E. 66th St., Cleveland, Ohio

#### **PLANTS**

Cleveland, Ohio Selma, Alabama Mentor, Ohio

## PROTECT YOUR SEED SHIPMENTS

The Porter Safety Seal-"The Seal That Seals"

Gives positive assurance against adulteration or substitution. Makes it possible to attach analysis or shipping tags with one operation at the time of sealing.

Is inexpensive; will not get out of order; is simple and

easy to operate.

Meets every requirement of the P. O. Dept. and is universally used by banks for sealing shipments of coin and currency.

The Porter Safety Seal is the invention of Capt. Thos. I. Porter of the U. S. Secret Service. It consists of a piece of lead with a steel pin firmly embedded in it, and has four

parallel holes through which is threaded a

Seal on Neck of Bag stout cord. With one simple operation the pin is forced into folded neck of bag and cord is pulled tight. The seal is compressed, imprinting your name and address and crimping seal, thus sealing the bag securely in such a manner that it cannot be opened without destroying the seal or leaving unmistakable evidence of tampering.

Sample sealed bag and full informations.

Sample sealed bag and full information sent on request.



Porter Safety Seal Co. 157 West Harrison St., CHICAGO

#### MISCELLANEOUS SIDE LINES-Continued

#### TREE PROTECTION

Owens Co., J. L. Minneapolis, Minn. Minneapons,
Sheffield Mfg. Co.
Burr Oak, Mich.

Tanglefoot Co., The Grand Rapids, Mich.

#### XMAS GREENS

Bitsche Seed & Nursery Co. (Mistletoe) Chickasha, Okla.
Chesmore Seed Co.
St. Joseph, Mo.
Conwell, Inc., H. Ernest
Milton, Delaware

Hofert, J.
Los Angeles, Cal.
Jones, The Holly Wreath Man
Milton, Dela.
Neilson, Knud
Frankeren. Ala. Evergreen, Ala.
Oregon Holly & Evergreen Co.
Portland, Ore. Poehlman Bros Chicago, Ill. Robbins, E. C. Pineola, N. C.

#### XMAS TREE HOLDERS

Dicks Stamping Co., Inc. Buffalo, N. Y.

#### SEEDSMEN'S SUPPLIES

#### ACCOUNTANTS AND ACCOUNTING SYSTEMS

Ernst & Ernst New York, N. Y.

#### ADV. FOR SEEDSMEN

Benton Review Shop Benton Review Shop
Fowler, Ind.

DeLaMare Co., Inc., A. T.
New York, N. Y.
Hartland Adv. Service
New York, N. Y.
Hurley, D. C.
Boston, Mass.
Lau Colortype Co., Max
Chicago, Ill.
Karle Lithographic Co.
Rochester. N. Y. Karle Lithographic Co.
Rochester, N. Y.
McFarland Publicity Service
Harrisburg, Fa.
Manz Engraving Co.
Chicago, Ill.
Morse Co., A. B.
St. Joseph, Mich.
Newell, R. B.
Chicago, Ill.
Rochester Litho. Co.
Rochester, N. Y.

#### BAGS—COTTON OR BURLAP

Ames Bag Machine Co. Cleveland, Ohio
(See Adv. Index Page 178)

Bemis Bro. Bag Co.
St. Louis, Mo.
(See Adv. Index Page 178)

Bosworth Co., M. M.
Memphis, Tenn. Memphis, Tenn.
Chase Bag Co.
Cleveland, Ohio
Chatfield & Wood Sack Co.
Cincinnati, Ohio
Cleveland Buckram & Bag Co.
Cleveland Buckram & Co.

Cleveland Buckram & Bag Co.
Cleveland, Ohio
(See Adv. Index Page 178)
Field & Co., Marshall
Chicago, Ill.
Messinger Paper Co.
Chicago, Ill.
Morrison & Risman Co.
Buffalo, N. Y.
Southern Cotton Mills Agency
Raltimore Md

Baltimore, Md. Western Bag Co. Nashville, Tenn.

#### BAGS—PAPER

Bates Valve Bag Co., R. P. Chicago, Ill.

Bemis Bro. Bag Co.
St. Louis, Mo.
(See Adv. Index Page 178) Brown Bag Filling Machine Co.

Brown Bag Filling Machine Co. Fitchburg, Mass.

(See Adv. Index Page 178)
Chase Bag Co.
Cleveland, Ohio
International Paper Co.
New York, N. Y.
(See Adv. Index Page 178)
Messinger Paper Co.
Chicago, Ill.
Miller Brothers Company
Newark, N. J.
Stone & Forsyth Co.
Boston, Mass. Boston, Mass.

#### BAG CLOSING MACHINES

Bates Valve Bag Co., R. P. Chicago, Ill. Brown Bag Filling Machine Co. Fitchburg, Mass.
(See Adv. Index Page 178)
Savage Co., Inc., W. J.
Knoxville, Tenn.
Union Special Machine Co.

Chicago, Ill.

#### BAG FILLING MACHINES

Brown Bag Filling Machine Co.
Fitchburg, Mass.
(See Adv. Index Page 178)
Howes Co., S.
Silver Creek, N. Y.
Huntley Mfg. Co.
Brocton, N. Y.
National Packaging Machinery Co.
Jamaica Plain, Boston, Mass.
Stokes & Smith Co., The
Philadelphia, Pa.
Union Special Machine Co.
Chicago, Ill.

Brown Bag Filling Machine Co.

#### BAG HOLDERS

Gump Co., B. F. Chicago, Ill. Strong Scott Co. Minneapolis, Minn.

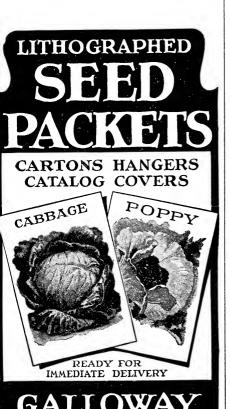
#### BAG PILERS-CONVEYORS

Dow Wire & Iron Works Louisville, Ky. Howes Co., S. Silver Creek, N. Y.

Revolvator Co. Jersey City, N. J.

#### BAG SEALS

Bates Valve Bag Co., R. P. Chicago, Ill.
Porter Safety Seal Co.
Chicago, Ill.
(See Adv. Index Page 178)



LITHOGRAPHING CO.

SAN FRANCISCO, CAL.

Write us for samples



When seed bags wear out, your season's profits suffer. Protect your profits this year. Buy genuine Bemis A's to start with and get twice as many round trips out of every bag. Bemis A Seamless Seed Bags are extra heavy, woven in our own mills from carefully selected cotton. No seams to rip. The exclusive Bemis overcast bottom prevents raveling. Full 16-oz. weight guaranteed.

See your dealer early, for Bemis A's are in strong demand. If he can't supply you, write our nearest factory.

## BEMIS BRO. BAG CO. Quick Shipment From These Bemis Factories

St. Louis Minneapolis Omaha New Orleans San Francisco Indianapolis Memphis Kansas City Seattle Ware Shoals, S. C. Houston Brooklyn Buffalo Wichita Winnipeg

Jay

## BÉMIS

The Standard Seamless SEED BAG of America

#### SEEDSMEN'S SUPPLIES-Continued

#### BAG STITCHING MACHINES

Union Special Machine Co. Chicago, Ill.

#### BAG TRIERS

Seed Trade Reporting Bureau Chicago, Ill. (See Adv. Index Page 178)

#### BEAN PICKERS

Ferrell & Co., A. T.
Saginaw, Mich.
Howes Co., S.
Silver Creek, N. Y.
Huntley Mfg. Co.
Brocton, N. Y.
Judson Michighean Co. Judson Michigbean Co. Detroit, Mich.

#### BOXES—PARCEL POST

Hinde & Dauch Paper Co. Sandusky, Ohio

Stone & Forsyth Co. Boston, Mass.

#### CARTONS—PAPER

CARTONS—PAPER
Galloway Lithographing Co.
San Francisco, Calif.
(See Adv. Index Page 178)
Gereke Allen Carton Co.
St. Louis, Mo.
Heinrich, Inc., John A.
Minneapolis, Minn.
(See Adv. Index Page 178)
Sefton Mfg. Co.
Chicago, Ill.
Stecher Lithographic Co.
Rochester, N. Y.
(See Adv. Index Page 178)
Stone & Forsyth Co.
Boston, Mass.
Weaver Mailing Env. & Box Co.
Philadelphia, Pa.
Webster Co., Mel L.
Independence, Ia.

Independence, Ia

#### CARTONS—PRINTED

Galloway Lithographing Co.
San Francisco, Calif.
(See Adv. Index Page 178)
Genesee Valley Lithograph Co.
Rochester, N. Y.
(See Adv. Index Page 178)
Karle Lithographic Co.
Rochester, N. Y.
Miller Brothers Company
Newark, N. J.
Sefton Mfg. Co.
Chicago, Ill.
Stecher Lithographic Co.

Stecher Lithographic Co.
Rochester, N. Y.
(See Adv. Index Page 178)

#### CATALOG COLORED COVERS

Campbell Printing Co.

Des Moines, Iowa
(See Adv. Index Page 178)
Christy Color Engraving & Ptg. Co.
Rochester, N. Y.
Excelsior Printing Co.

Excelsior Printing Co.
Chicago, Ill.
Galloway Lithographing Co.
San Francisco, Calif.
(See Adv. Index Page 178)
Genesee Press, The
Rochester, N. Y.
Genesee Valley Lithograph Co.
Rochester, N. Y.
(See Adv. Index Page 178)
Karle Lithographic Co.
Rochester, N. Y.
Lau Colortype Co., Max
Chicago, Ill.
McFarland Co., J. Horace
Harrisburg, Pa.

Magill-Weinsheimer Co. Chicago, Ill. Merchants Litho. Co.

Chicago, Ill.
Morse Co., A. B.
St. Joseph, Mich.
Printing Products Corporation

Printing Products Corporation Chicago, Ill. Quality Print Shelbyville, Ind. Rimes Illustrating Co., M. L. New York, N. Y. Rochester Lithographing Co. Rochester, N. Y.

Stecher Lithographing Co.
Rochester, N. Y.
(See Adv. Index Page 178)

#### CATALOG ILLUSTRATIONS

Campbell Printing Co.

Campbell Printing Co.

Des Moines, Iowa
(See Adv. Index Page 178)
Galloway Litho. Co., Inc.
San Francisco, Cal.
(See Adv. Index Page 178)
Genesee Press, The
Rochester, N. Y.
Lau Colortype Co., Max
Chicago, Ill.
Lotus Engraving Co.
Atchison, Kans.
McFarland Publicity Service
Harrisburg, Pa.
Magill-Weinsheimer Co.
Chicago, Ill.
Manz Engraving Co.,
Chicago, Ill.
Rimes Illustrating Co., M. L.

Rimes Illustrating Co., M. L. New York City, N. Y. Rochester Litho. Co. Rochester, N. Y.

#### CATALOG PRINTERS

Benton Review Shop

Fowler, Ind. Byrd Press, Inc., Richmond, Va. The Wm. Campbell Printing Co.

Campbell Printing Co.

Des Moines, Iowa
(See Adv. Index Page 178)
Combe Printing Co.
St. Joseph, Mo.
Cuneo Co., The
Chicago, Ill.
DeLaMare Co., Inc., A. T.
New York, N. Y.
Excelsior Printing Co.
Chicago, Ill.

Excelsior Printing Co.
Chicago, Ill.
Franklin Hudson Publ. Co.
Kansas City, Mo.
Gable Bros. Printing Co.
Brookfield, Ill.
Genesee Press, The
Rochester, N. Y.
Hartland Adv. Service
New York, N. Y.
Karle Lithographic Co.
Rochester, N. Y.
Lau Colortype Co., Max
Chicago, Ill.
McFarland Publicity Service
Harrisburg, Pa.
Magill-Weinsheimer Co.
Chicago, Ill.

Magill-Weinsheimer Co.
Chicago, Ill.
Morse Co., A. B.
St. Joseph, Mich.
Plough Printing Co.
Memphis, Tenn.
Printing Produets Corp.
Chicago, Ill.
Process Color Printing Co.
Rochester, N. Y.
Rimes Illustrating Co., M. L.
New York, N. Y.
Stephens Printing & Stationery Co., The
Hugh Hugh

Jefferson City, Mo.

## **SEED PACKETS**

--

WE HAVE A FULL LINE OF STOCK IN BOTH FLOWER AND VEGETABLE PACKETS

Write for samples and prices
CATALOGUE COVERS, BOX LABELS
AND HANGERS

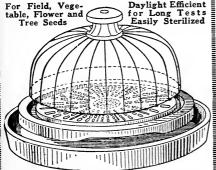
ORDERS PLACED ON TIME WILL
BE DELIVERED ON TIME

Genesee Valley Lithograph Co.

INCORPORATED

ROCHESTER, NEW YORK

## Self-Watering Germinator



Now after much experimenting a reliable and efficient self-moistening germinator is available.

The self-moistening porous disc has divided surface to facilitate counting. There are 10 sections of 10 indentations. The cover is of clear glass and ventilated.

This daylight germinator will attract attention in store, office or display window. More than 100 of these germinators are used by one of the large seed houses. It is guaranteed to be satisfactory. Price \$3.50 each, or \$3.25 in dozen lots, delivered in the United States.

The Seed Trade Reporting Bureau
1018 S. Wabash Ave. Chicago

## COLOR!



That's the dominant note in advertising today.

We have never had a customer who discontinued the use of color in printing in a nursery or seed catalog. The unanimous opinion is: "It pays!"

Our collection of fine color plates for stock use is now

very large.

Write us about your catalog needs. We can help you.

## CAMPBELL PRINTING COMPANY

917 Walnut St. Des Moines, Iowa

#### SEEDSMEN'S SUPPLIES-Continued

#### CLEANING MACHINERY

Burch Corporation, The Crestline, Ohio Cleland Mfg. Co. Minneapolis, Minn. Eddy Seed Cleaners, Ltd.
Toronto, Canada
Ferrell & Co., A. T.
Saginaw, Mich. Gravity Grain Grader Co. Stockton, Cal. Howes Co., S.
Silver Creek, N. Y.
Huntley Mfg. Co.
Brocton, N. Y.
Johnson & Field Mfg. Co.
Racine, Wis. Judson Michigbean Co. Detroit, Mich.
Owens Co., J. L.
Minneapolis, Minn. Rice, W. A.
Jerseyville, Ill.
Sutton, Steele & Steele, Inc.
Dallas, Texas
Twin City Separator Co.

#### COLOR REPRODUCTIONS FOR SEEDSMEN AND NURSERYMEN

Genesee Press, The Rochester, N. Y. Lau Colortype Co., Max Chicago, Ill. Magill-Weinsheimer Co. Chicago, Ill. Manz Engraving Co. Chicago, Ill. Process Color Printing Co. Rochester, N. Y.

Minneapolis, Minn.

#### COMMERCIAL SEED TESTING

Commercial Seed Laboratory
Washington, D. C., and Toledo, O.
International Seed Testing Laboratories
New York, N. Y.
(See Adv. Index Page 178)

#### CORN GRADERS

Minneapolis, Minn. Ferrell & Co., A. T. Saginaw, Mich. Howes Co., S. Silver Creek, N. Y. Hunnicutt Co., Chas. Wilmington, Ohio Huntley Mfg. Co.
Brocton, N. Y. Manson Cambell Co. Detroit, Mich. Maroa Mfg. Co. Maroa, Ill. Owens Co., J. L. Minneapolis, Minn. Richards & Sons, Ross V.
North Manchester, Ind.
Universal Hoist & Mfg. Co. Cedar Falls, Iowa (See Adv. Index Page 178)

Cleland Mfg. Co.

#### CORN SHELLERS

Constant Co., B. S. Bloomington, Ill. Howes Co., S.

Brocton, N. Y.
Union Iron Works
Decatur, Ill.

#### CRACKED CORN CLEANERS AND GRADERS

Cleland Mfg. Co. Minneapous, —
Minneapous, —
Howes Co., S.
Silver Creek, N. Y.
Huntley Mfg. Co.
Brocton, N. Y.
Linkhart Mfg. Co.
Indianapolis, Ind. Straub Co., A. W.
Philadelphia, Pa.
Universal Hoist & Mfg. Co.
Cedar Falls, Iowa
(See Adv. Index Page 178)

#### CRUSHERS

Gruendler Pat. Crusher & Pul. Co. St. Louis, Mo. Williams Patent Crusher & Pulv. Co. Chicago, Ill.

#### DUST COLLECTORS

Day Co., The Minneapolis, Minn. Howes Co., S.
Silver Creek, N. Y.
Huntley Mfg. Co.
Brocton, N. Y.

#### **ENVELOPES**

Berkowitz Envelope Co. Kansas City, Mo. (See Adv. Index Page 178) Brown Bag Filling Mach. Co. Frichburg, Mass.

(See Adv. Index Page 178)

Eagle Envelope Co.
Chicago, Ill.

Heco Envelope Co.
Chicago, Ill.

Heinrich, Inc., John A.
Mintennils, Mint. Minneapolis, Minn. (See Adv. Index Page 178)

Letalog Mailer Co. Chicago, Ill. Weaver Envelope Co. Philadelphia, Pa.

#### FEED GRINDERS

Duplex Mill & Mfg. Co. Springfield, Ohio
Gibson Oat Crusher Co.
Chicago, Ill.
Gruendler Patent Crusher & Pulv. Co St. Louis, Mo. Howes Co., S. Silver Creek, N. Y. Silver Creek, N. Y.
Linkhart Mfg. Co.
Indianapolis, Ind.
McCarger Mfg. Co., L. B.
North Kansas City, Mo.
Williams Patent Crusher & Pulv. Co.
St. Louis, Mo.

#### FEED PACKAGING MACHINERY

Ferguson & Co., J. L. Joliet, Ill. Howes Co., S. Silver Creek, N. Y. Huntley Mfg. Co. Brocton, N. Y.

National Packaging Machinery Co. Jamaica Plain, Boston, Mass. Stokes & Smith Co., The Philadelphia, Pa.

#### GERMINATORS

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Kny Scheerer Corp. of America
New York City, N. Y.
Seed Trade Reporting Bureau
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Chicago, III.

(See Adv. Index Page 178)
Specialty Mfg. Co.
St. Paul, Minn.

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Dreer, Inc., Henry A.
Philadelphia, Pa.
Metropolitan Material Co.
Brooklyn, N. Y.

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Jacobs & Co., S.
Brooklyn, N. Y.
Martin Iron Works Martin Iron Works
Los Angeles, Calif.
Metropolitan Material Co.
Brooklyn, N. Y.
Skinner Irrigation Co. Troy, Ohio
X. L. Mfg. Co.
Chicago, Ill.

#### LABORATORY EQUIPMENT

Huntley Mfg. Co.
Brocton, N. Y.
Kny-Scheerer Corporation of America
New York City, N. Y.
Seed Trade Reporting Bureau Chicago, II.
(See Adv. Index Page 178)
Specialty Mfg. Co.
St. Paul, Minn. Torsion Balance Co. New York City, N. Y.

#### LEGAL AID

Bebb, Herbert Chicago, Ill. Smith, Curtis Nye Boston, Mass.

#### MIXERS—SEED OR FEED

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Crestline, Ohio
Gump Co., B. F.
Chicago, Ill.
Howes Co., S.
Silver Creek, N. Y.
Huntley Mfg. Co.
Brocton, N. Y.
Savage Co., W. J.
Knoxville, Tenn.

#### PACKET FILLING

Brown Bag Filling Machine Co. Fitchburg, Mass.
(See Adv. Index Page 178)
National Packaging Machinery Co.
Jamaica Plains, Boston, Mass.

#### PACKET FILLING MACHINES

Automatic Packaging Machinery Co. Nashua, N. H. Brown Bag Filling Machine Co. Fitchburg, Mass.

(See Adv. Index Page 178)
Ferguson Co., J. L.
Joliet, Ill.
Hoepner Auto Scale Co.
Chicago, Ill. Chicago, Ill.
Packaging Machinery Co.
Yonkers, N. Y.
Stokes & Smith Co., The Philadelphia, Pa.

#### PATENT ATTORNEY

Scheible, Albert Chicago, Ill.

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Philadelphia, Pa.
International Paper Co.
New York, N. Y.
(See Adv. Index Page 178)
Kimberly-Clark Co.
Chiego III Chicago, Ill.
Quality Print, Inc.
Shelbyville, Ind.
Seaman Paper Co. Chicago, Ill.

#### PAPER-MULCH

International Paper Co. New York, N. Y. (See Adv. Index Page 178)

#### PAPER—WRAPPING

International Paper Co.
New York, N. Y.
(See Adv. Index Page 178)
Messinger Paper Co.
Chicago, Ill.
Miller-Tompkins & Co.
New York City, N. Y.
Safepack Mills
Boston, Mass.
Stone & Forsyth Co.
Boston. Mass. Boston, Mass.

#### POSTERS

Galloway Lithographing Co., Inc.

Galloway Lithographing Co., Inc.
San Francisco, Cal.
(See Adv. Index Page 178)
Genesee Valley Lithograph Co.
Rochester, N. Y.
(See Adv. Index Page 178)
Morse Co., A. B.
St. Joseph, Mich.
Quality Print, Inc.
Shelbyville, Ind.
Rimes Illustrating Co., M. L.
New York, N. Y.
Stecher Lithographic Co.
Rochester, N. Y.

Rochester, N. Y. (See Adv. Index Page 178)

#### POULTRY FEED MACHINERY

Gump Co., B. F.
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Silver Creek, N. Y.
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Fig. 39. AGATE SEED SCALE

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Chicago, III.

(See Adv. Index Page 178)
Lewis Co., G. B.
Watertown, Wis.

#### SAMPLE PANS

Seed Trade Reporting Bureau Chicago, Ill. (See Adv. Index Page 178)

#### SCALES—AUTOMATIC

Automatic Weighing Machine Co. Brooklyn, N. Y. Exact Weight Scale Co., The

Exact Weight Scale Co., The Columbus, Ohio Ferguson Co., J. L. Joliet, Ill.
Howe Scale Co. Chicago, Ill.
Howes Co., S. Silver Creek, N. Y.
National Packaging Machine Co. Jamaica Plain, Boston, Mass. Richardson Scale Co.
Passaic, N. J.
Stokes & Smith Co., The Philadelphia, Pa.

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Exact Weight Scale Co., The Columbus, Ohio
Fairbanks, Morse & Co.
Chicago, Ill.
Hoepner Auto. Scale Co.
Chicago, Ill.
Howe Scale Co.
Chicago, Ill.
Jacobs Bros. Co., Inc.
Brooklyn, N. Y.
Seed Trade Reporting Bureau
Chicago, Ill.

Chicago, III.
(See Adv. Index Page 178)
Toledo Scale Co.

Toledo Scale Co.
Toledo, Ohio
Torsion Balance Co.
New York City.
Troemner Co., Henry
Philadelphia, Pa.

(See Adv. Index Page 178)

#### SCALES-LABORATORY

Kny Scheerer Corp. of America New York City, N. Y. Seed Trade Reporting Bureau Chicago, III. (See Adv. Index Page 178) Torsion Balance Co. New York City, N. Y.

#### SCARIFIERS

Birdsell Mfg. Co.
South Bend, Ind.
Cleland Mfg. Co.
Minneapolis, Minn.
Duflecto Mfg. Co.
Nevada, Iowa
Eddy Seed Cleaners, Ltd.
Toronto, Canada
Ferrell & Co., A. T.
Saginaw, Mich.
Jensen, P. E.
Nevada, Iowa

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Silver Creek, N. Y.
Huntley Mfg. Co.
Brocton, N. Y.
Seed Trade Reporting Bureau

#### SEALS

Chicago, Ill. (See Adv. Index Page 178)

Bates Valve Bag Corp. Chicago, Ill.
(See Adv. Index Page 178)
Porter Safety Seal Co. Chicago, Ill.
(See Adv. Index Page 178)

#### SEED CASES

Heller & Co., W. C.

Montpelier, Ohio Lewis, G. B. Watertown, Wis. Walker Bin Co. Penn Yan, N. Y.

#### SEED CLEANING

Kellogg Seed Co., John L. Chicago, Ill. (See Adv. Index Page 178)

#### SEED DRIERS

Ellis Drier Co. Chicago, Ill.

Hess Warming & Ventilating Co.
Chicago, Ill. Hess Warming & Ventilating
Chicago, Ill.
Howes Co., S.
Silver Creek, N. Y.
Invincible Grain Cleaner Co.
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Des Moines, Ia.
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(See Adv. Index Page 178)
Galloway Lithographing Co.
San Francisco, Cal.
(See Adv. Index Page 178)
Genesee Valley Lithograph Co.
Rochester, N. Y.
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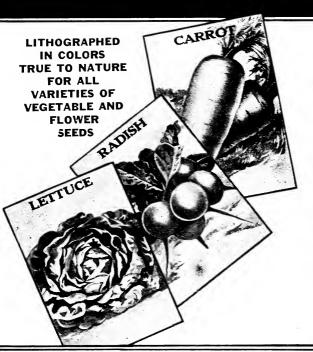
(See Adv. Index Page Karle Lithographic Co. Rochester, N. Y. McFarland Co., J. Horace Harrisburg, Pa. Rochester Lithographing Co. Rochester, N. Y.

Stecher Lithographic Co. Rochester, N. Y. (See Adv. Index Page 178)

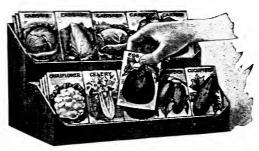
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(See Adv. Index Page 178)
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Seed Packet Display Racks-Continued

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(See Adv. Index Page 178)
Manitowoc Building Supply Co.

Manitowoc, Wis.
Walker Bin Co.
Penn Yan, N. Y.
Webster Co., Mel. L.
Independence, Iowa

#### SEED POLISHERS

Goodner Pump & Mfg. Co. Rocky Ford, Colo.

#### SEED SAMPLE ENVELOPES

Ames Bag Machine Co.

Cleveland, Ohio
(See Adv. Index Page 178)

Bemis Bro. Bag Co.
St. Louis, Mo.
(See Adv. Index Page 178)

Borkowits Envalors Co.

Berkowitz Envelope Co. Kansas City, Mo.

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Heco Envelope Co. Chicago, Ill.

Heinrich, Inc., John A. Minneapolis, Minn.

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Miller, Tompkins & Co.
New York City, N. Y.
National Bag Co.
Naperville, Ill.
Ontario Co.

Ontario Co. Chicago, Ill.

Chicago, III.

Stecher Lithographic Co.
Rochester, N. Y.
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Tension Envelope Co.
Brooklyn, N. Y.
Weaver Mailing Envelope & Box Co.
Philadelphic Do Philadelphia, Pa.

Western Envelope Co. Kansas City, Mo.

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Chicago, Ill.
Koger Pea & Bean Thresher Co.
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International Tag Co. Chicago, Ill. Quality Print, Inc. Shelbyville, Ind. Quality Tag Works Franklin, Ind.

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Lansing, Mich.
(See Adv. Index Page 178)
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National Cash Register Co.

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#### TAG ADDRESSING MACHINES

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St. Louis, Mo.
(See Adv. Index Page 178)
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Chicago, Ill.

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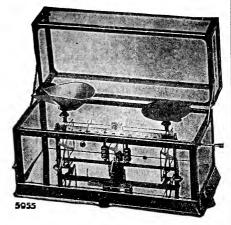
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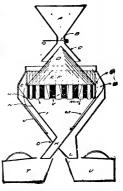
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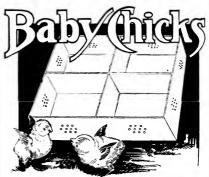


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